

THE
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OF
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A MONTHLY RECORD OF THE MEDICAL AND AUXILIARY SCIENCES.

That alone is the right medicine which can remove disease :
He alone is the true physician who can restore health.

Charaka Samhitā.

EDITED BY
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[No. 1.

OUR MATERIA MEDICA—FACT AND FICTION.

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When we speak of the homeopathic materia medica we are speaking of something that is very definite but at the same time is also indefinite. The materia medica of the fathers of Homœopathy is not the materia medica of their successors. In the "Materia Medica Pura" Hahnemann records the symptom-lists of sixty-seven medicines. In the "Chronic Diseases" there appear symptom-lists of thirty additional medicines. Thus we find that Hahnemann furnishes us with one hundred and seven remedies, approximately one-tenth of the number of remedies that compose our materia medica as we have it to-day.

In the "Dictionary of Materia Medica," Dr. Clarke records the symptom-lists of one thousand and sixty-three substances which have been used as medicines by homœopaths in practice. These medicines have been derived from the vegetable, animal and mineral kingdom; some of them have been "proved" in accordance with the rules laid down by Hahnemann, others have been found acceptable clinically, and a very few, notably *Atropa Beladonna*, have been proved, not only in accordance with the rules of Hahnemann, but also in accordance with all the checks and counterchecks that science can devise.

In the "Organon," Sections 121 to 144, Hahnemann formulates rules and regulations for the guidance of provers of sub.

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stances to be used as medicines in accordance with the Law of 'Similar. And to-day in this twentieth century as far as general procedure we cannot better the directions of the founder of Homœopathy.

One who reads the early literature of Homœopathy as found in the writings of Hahnemann, his contemporaries and immediate successors cannot help being amazed at the powers of observation, the conscientious devotion to the discovery of truth, the enthusiasm of these pioneers of Homœopathy. When we further consider the immense difficulties, from the standpoint of present day science, under which they conducted their investigations we can but marvel, not that our materia medica is imperfect, but that it is as perfect as it is. We can only conclude that the materia medica of the fathers of Homœopathy must be true in its fundamental and characteristic symptoms, otherwise it would not have been an instrument of healing in the hands of homœopathic prescribers for a century.

In the days of Hahnemann and subsequently the provers of our medicines recorded all symptoms occurring after the taking of a drug as caused by the drug. In this way many symptoms have been incorporated in our materia medica which are not drug effects, symptoms which occurred after taking the drug rather than because of taking the drug. Consequently we have a materia medica which is part of it fact and the rest fiction or at best unproved fact in some cases. We know of the facts of the materia medica because of the success in the treatment of the sick which has attended the exhibition of these medicines according to the indications found in the symptoms-lists. The amount of fiction which may be in our materia medica we can only imagine.

Sections 143 and 144 of the "Organon" read as follows: "If we have tested on the healthy individual a considerable number of simple medicines and carefully and faithfully registered all the disease elements and symptoms they are capable of developing as artificial disease-producers, then only have we a true materia medica—a collection of real, pure, reliable modes of

action of simple medicinal substances, a volume of the book of nature, wherein is recorded a considerable array of the peculiar changes of the health and symptoms ascertained to belong to each of the powerful medicines, as they were revealed to the attention of the observer, in which the likeness of the (homœopathic) disease elements of many natural diseases to be hereafter cured by them are present, which, in a word, contain artificial morbid states, that furnish for the similar natural morbid states the only true, homœopathic, that is to say, specific, therapeutic instruments for effecting their certain and permanent cure." "From such a *materia medica* everything that is conjectural, all that is more assertion or imaginary should be strictly excluded; everything should be the pure language of nature carefully and honestly interrogated." Looking at these statements of Hahnemann we cannot but believe that we are in the straight Hahnemannian succession when we ask that our *materia medica* be put upon a strictly scientific basis.

When, however, we undertake to consider the particular merits and defects of the homœopathic *materia medica* we enter upon a large field of inquiry which cannot be considered at length at this time.

Among the followers of Hahnemann are found men who, taking the *materia medica* literally, go about their professional duties with the consciousness that the *materia medica* as we have it to-day is all-sufficient for their therapeutic needs. A still larger class is made up of men, who, in view of the enormous amount of labor, expense, and time involved in scientifically verifying Hahnemannian *materia medica*, prefer to take the *materia medica* as it is, try to separate fact from fiction as determined in every-day practice by themselves and others. The predominance of this class in our ranks accounts for the preponderance of clinical over scientific data found in papers read before the various societies.

There is still another class of our practitioners, and the number of this class is on the increase, which maintains that while the *materia medica* as we have it may be fact in the

main, still, much is known to be fiction. The members of this class are unwilling to undertake, individually, to determine what is fact and what is fiction. They declare for the verification of all symptoms by provings of the various materials used as medicines by a series of pharmacological studies under the superintendence of men of scientific training who will see to it that every test with which science is acquainted may be used in this endeavor to make our *materia medica* trustworthy in every respect.

No one who contemplates the century of achievement of in Homœopathy "belongs of right to scientific medicine," but that serving what is true in our *materia medica*, but he may also see the necessity of adding to it the sanctions which science demands. But whatever may be our individual opinion the fact remains that as long as it seems desirable for us to maintain a separate existence as Homœopathic practitioners we must not neglect our *materia medica*. More than that, the attainment of the goal which is our only excuse for such separate existence namely, that the truth of Homœopathy may be acknowledged by all the world, depends upon our demonstration of this truth in the most accurate and scientific manner possible.

Some of our friends are of the opinion that Homœopathy has already fulfilled its mission in the world and now has no more excuse for existence. Abraham Flexner, the able investigator of the Carnegie Foundation for the Advancement of Teaching, in his now famous Bulletin No. 4, entitled Medical Education in the United States and Canada, on the subject "Medical Sects" reports as follows: "In the year 1900 there were twenty-two Homœopathic colleges in the United States; to-day there are fifteen; the total student enrolment has within the same period been cut almost in half, decreasing from 1909 to 1009; the graduating classes have fallen from 413 to 246. As the country is still poorly supplied with Homœopathic physicians, these figures are ominous; for the rise of legal standard must inevitably affect Homœopathic practitioners. In the financial weakness of their schools the further shrinkage of the student body

will inhibit first the expansion, then the keeping up, of the sect.

"Logically, no other outcome is possible. The ebbing vitality of Homœopathic schools is a striking demonstration of the incompatibility of science and dogma. One many begin with science and work through the entire medical curriculum consistently, exposing everything to the same sort of test; or one may begin with a dogmatic assertion and resolutely refuse to enter in anything at variance with it. But one cannot do both. One cannot assert simultaneously science and dogma; one cannot travel half the road under the former banner, in the hope of taking up the latter, too, at the middle of the march. Science once embraced, will conquer the whole. Homœopathy has two options; one to withdraw into the isolation in which alone any peculiar tenet can maintain itself; the other to put that tenet into the melting-pot. Historically it undoubtedly played an important part in discrediting empirical allopathy. But laboratories of physiology and pharmacology are now doing that work far more effectively than Homœopathy; and they are performing a constructive work for which Homœopathy as such is unfitted. It will be clear, then, why, when outlining a system of schools for the training of physicians on scientific lines, no specific provision is made for Homœopathy. For everything of proved value in Homœopathy belongs of right to scientific medicine and is at this moment incorporated in it; nothing else has any footing at all, whether it be of allopathic or homœopathic lineage." The author then quotes that familiar saying of Dr. Osler which amounts to therapeutic nihilism and the truth of which is certainly open to question.

We would agree that all that is of value, not "proved value," in Homœopathy "belongs of right to scientific medicine," but that it is "at this moment incorporated in it" will take more than mere assertion to substantiate. The sooner that critics of Homœopathy learn that we regard the fundamental truth of Homœopathy as scientific and capable of being proved such the better it will be for them. We have never objected to having Homœopathy placed in the melting-pot. Indeed all the power and

patronage of regular medicine has consistently objected to its being placed there. The Law of Similars is a natural scientific law as much as is the Law of Gravitation, and when any one has the effrontery to call it "dogma" he merits the severest censure that we are capable of giving him. We may be at times dogmatic in our assertions of the truths and principles of Homœopathy, but few if any of the "scientific school of medicine" have been willing to apply the tests which they readily and eagerly apply to any new theory in Physiology, Chemistry or Physics. In short, such conclusions as these can only be accounted for by remembering that a lay investigator such as compiled this report while admirably equipped to say what is of merit or is defective in our teaching methods as well as to criticize our equipment, has no adequate conception of what Homœopathy really is, what its achievements have been and therefore sees no reason in it all.

Such an opinion, however, is of value to us inasmuch as it warns us what our duty is if we deem it desirable that our homœopathic institutions may continue their existence as such. In a word we must convince the scientific mind of the world that the fundamental principles of Homœopathy, shorn of unnecessary and unwarranted assertions, notions of men, new and old, are scientific. If we do not do this it is certain that it will be done for us, and some day, not far distant, we shall awake from sleep to find some one proclaiming to the world a new law, apparently having no connection with our homœopathic law, and yet embodying all that is in that law. We see to-day in many parts of the world scientific researches being conducted which confirm us in the belief that the Law of Similars, as discovered by Samuel Hahnemann, has had as yet a very limited application, and that as time goes on its universality will be generally recognized. In the meantime we had best take the opinion of a Watters or a Copeland rather than that of a lay investigator.

The question then comes as to just what our part should be in putting the truths of Homœopathy upon unquestioned scientific grounds. It seems to me that we can do no better thing than

to establish on our several medical colleges well-endowed departments of pharmacology.

In this same Carnegie report we have the opinion of the investigator as to what a department of pharmacology should be. After speaking of anatomy and physiology as the "vestibule of medical education" he goes on to say:

"The next step carries the student *in medias res*; he begins the study of pharmacology,—the experimental study of the response of the body to medication.

"The science got its first problem in the first place from the credulity of which the traditional pharmacopœia is the encyclopedic expression. It undertook to question the complacency and vagueness of the empiric. How far was his reliance upon specific agents justified? If at all was it possible to ascertain the source of their efficiency and its limits?

"Pharmacology was thus originally negative and critical. It rapidly pruned away exaggeration and superstition, leaving, however a vigorous growth behind. It ascertained, for example, that quinine was administered in vain nine times out of ten; but that in the single condition in which it was applicable—malaria—it struck at the root of the disease by actually destroying in the blood the obnoxious parasite. The limits of the effectiveness of digitalis, atropine, strychnine, have been discovered and explained and similarly, the utter uselessness of dozens of concoctions with which the digestive capacity of the race has long been taxed. Intelligence has thus been introduced into a realm for ages unguardedly open to ignorance and recklessness.

The science did not long remain merely critical; the development of chemistry and experimental physiology created a positive opportunity. Given, in a word, this or that condition,—a disease, a symptom or pain itself,—cannot an agent be devised capable of combating it? Cocaine, the antipyretics, the various glandular preparations, and serum therapy are among the affirmative replies that witness the constructive possibilities of pharmacodynamics. The strictly experimental science thus richly rewarded, has reinforced physiological conceptions independently

at work in the effort to rationalize materia medica and therapeutics. Instead of native reliance upon poly-pharmacy, diseases and their attendant symptoms have now been divided into some half-dozen provisional classes, subject to continuous revision, according to the method of attack to which they are at the moment most accessible. There are those that drugs actually combat,—syphilis and malaria for example; next the self limited diseases, in the course of which therapeutic measures may be used to avert dangerous symptomatic consequences,—as bathing reduces the temperature in typhoid, as chloroform checks convulsions in strychnine poisoning, as morphine relieves mere pain. There are those in which the body's natural methods of defence may be hastened and strengthened, as through serum therapy; those in which our only reliance thus far is on environment or suggestion; and finally, those in which summary relief may be had through the surgeon.

In the university, pharmacology has critically an extensive, creatively an apparently boundless opportunity. The medical student can at best browse the field here and there. But as was found to be the case with experimental physiology, he cannot forego that opportunity, limited though it be. The young doctor's therapeutic environment is still distinctly unfavorable. He is exposed to danger, front and rear. The traditions of the profession are in the main crudely empiric; they embody a 'pop-gun pharmacy, hitting now the malady and again the patient, the doctor himself not knowing which.' Besides the practitioner is subjected, year in, year out, to the steady bombardment of the unscrupulous manufacturer, persuasive to the uncritical, on the principle that, what I tell you three times is true.' Against bad example and persistent asseveration, only precise scientific concepts and a critical appreciation of the nature and limits of actual demonstration can protect the young physician. The laity has in this matter more to fear from credulous doctors than from advertisements themselves; for a nostrum containing dangerous drugs is doubly dangerous if introduced into the household by the prescription of a physician who knows nothing of its com-

position and is misled as to its effect. Experimental physiology and pharmacology must train the student both to doubt unwarranted claims and to be open to really authoritative suggestion; for it is equally important to reject humbug and to accept truth. Fortunately, even a brief concrete experience, may teach one to be wary in weighing evidence.

"The course in pharmacology need include, therefore, actual experimental determination by the student himself of the effects on animals of a relatively small number of carefully selected agents; demonstration of others by the instructor; and a critical survey of the rest by means of lectures and recitation. *Materia medica*, now much shrunken need concern itself only with the pharmaceutical side aiming to familiarize the student with drugs of proved power and most agreeable and effective forms in which these may be administered. Therapeutics subsequently adds to these agents whatever other resources the clinician has accumulated—baths, electricity, massage, psychic suggestion, dietetics, etc.,—approaching the subject from the standpoint of disease, as opposed to the pharmacological approach from the standpoint of the drug itself."

The Report then proceeds to say that about 450 hours are devoted to instruction in pharmacology in the best schools. I presume the writer means that during the four years in the medical school each student receives that amount of instruction in pharmacology. I have consulted the catalogues of Johns Hopkins, Western Reserve University, Harvard and University of Pennsylvania, and I do not find anywhere near that number of hours given the subject. At Harvard, for example, the subject, like all subjects of the fourth year, is elective, so that although the presumption is that most students elect pharmacology still it is possible that most of them do not. The course at Harvard occupies every afternoon except Saturday from 2 to 6 during the months of April and May. It is called a course in Pharmacology and Toxicology, so that only a part of the time can be spent on pharmacology. In April and May, 1910, there were forty-one days which could be utilized for the course, making a total

of one hundred and sixty-four hours given to the subject. The course of instruction during these hours is as follows :

A. The study of the general physical and chemical characteristics of the most important organic and inorganic drugs. . .

B. Toxicological and pharmaceutical methods of extracting drugs.

C. The making of illustrative pharmaceutical preparations such as pills, ointments, et cetera.

D. Special study of drugs by groups, including *materia medica*, the pharmacological and toxicological action and therapeutical deductions. At the beginning of the exercise the student will examine the drugs to be studied and make some physical and chemical tests, followed by experiments on animals; after which comes a summing up of the facts learned experimentally, and an intelligent deduction as to their application in practical medicine with the writing of prescriptions.

From this exhibit it is easily seen that the experimental part of the course occupies but a small place in it.

This opinion is confirmed by conversation with an undergraduate Harvard medical student, who gave me to understand that the experimental portion of the course was entirely subsidiary to the didactic portion and that such experimental work as was done was upon animals; very little, if any, was performed upon the healthy human organism. The textbook used is that of Dr. Tyrode, and for the experimental work a special manual is provided.

At Johns Hopkins twenty afternoons, about eighty hours, are given to experimental pharmacology. At Western Reserve experimental pharmacodynamics occupies sixty-four hours. At the University of Pennsylvania only twenty-seven hours of experimental work is required with nine hours of demonstration. From actual examination of medical school catalogues it would seem that actual experimental work in pharmacology occupies a relatively small place in courses which include toxicology, old school *materia medica*, pharmacy and prescription writing.

That the homœopathic medical schools, if it had the money and was willing to do so, could offer a much better course in experimental pharmacology than is now being given in any institution in the country is obvious. You will note that Flexner in the passage above quoted states, at the outset, in his definition of pharmacology, that it is "the experimental study of the body to medication." Presumably by the word "body" he means the human body. If this is so, the homœopathic method of proving or trying-out drugs upon the human healthy organism is far superior to any animal experimentation that can be indulged in. For the gross physiological effects of drugs it is well to use animals, but for drug effects of the fineness necessary for intelligent prescribing, animals are of little value in this age of individualization of the case. In such a course in pharmacology in a homœopathic medical school all that is now done in the regular school could be done if thought desirable and in addition to that the homœopathic materia medica could be "re-proved" with scientific accuracy and method. Such a department would appeal especially to graduates in medicine and would certainly give our undergraduates something that they do not receive now.

Samuel Hahnemann was not the first pharmacologist, but he ranks well up in the list of those men, ancient and modern, who have added to the knowledge of the race something of inestimable value. Systems of one kind and another have arrived and passed beyond the ken of man, but Homœopathy has survived in its fundamental tenets because in them is truth. It remains for us and our successors to demonstrate this truth not to a few but to all the world. It remains for us to clothe the truths of Homœopathy in new garments, to substitute scientific statement for dogmatic assertion. We must take part in the scientific research which all over the world is even now confirming the truthfulness of homœopathic principles.

All of the works of Hahnemann had been published some years before the first laboratory for the study of drug effects, that of Rudolph Buchheim at Dorpat in 1849, was established. Since

that date many such laboratories have been founded, some in connection with universities, but many others have been due to the commercial enterprise of manufacturers of chemicals. But the home of experimental pharmacology, the study of drug effects by experimentation upon animals and man, should be in the university medical school, not in the laboratories of individuals, societies, or manufacturing chemists. The nearest approach to that which may be expected of these departments as far as the "re-proving" of the drugs of the homœopathic materia medica is to be found in the records of the proving of *Atropa Belladonna* which was made by the Ophthalmological, Otological and Laryngological Society under the direction of Dr. H. P. Bellows.

There is already evidence that homœopaths in this country realize the need of just this sort of thing as applied to Homœopathy. Hahnemann Medical College and Hospital of Philadelphia has just received a fund of one hundred thousand dollars to establish the Hering Chair of Homœopathic Research. Recent additions to the financial resources of our local institutions would seem to encourage us in the belief that somewhere some person or persons has one hundred thousand dollars, perhaps more, for the establishment, in Boston University School of Medicine, of a new department which could be known by no better name than that of that tireless worker in the field of experimental drug effects, the late Conrad Wesselhoeft.

But however that may be, it is desirable that we proceed as soon as possible to establish, in our medical college, departments of experimental pharmacology in which, not only the experiments as now conducted by our "best schools," but also, that which is much more valuable to us and to mankind, that our homœopathic materia medica may be "re-proved" in accordance with the best scientific procedure; further, that all that is valuable in physiological medicine may be studied; and, finally, that the truth of homœopathic practice may be demonstrated in such a way as to make it acceptable to the mind of the scientific practitioner of whatever name.

Even under the most favorable circumstances it will take a century or more to sift the chaff from the wheat. We can but build for the men of tomorrow, but let us look to it that we build well.—*The New England Medical Gazette*, December, 1910.

THE ETIOLOGY OF BERI-BERI.

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In a former paper published in the *THE LANCET* it was shown that the occurrence of beri-beri was intimately associated with the consumption of a diet of which white rice was the staple. This view of the origin of the disease, first stated in concise form in this country by Braddon, had its beginnings in the work of the Dutch physicians of the last century, and has since, been amplified and confirmed by the labours of Van Diefen, Dubruel, Fletcher, and others, and more especially by the valuable observations and researches of Braddon.

Further experimentation was undertaken by us to determine the mode of operation by which white rice was able to produce this result. Braddon believed that the cause of beri-beri was a poison developed in stale white rice by the action of some organism, while Dubruel held that a living germ was ingested with white rice, and that this germ, multiplying in the body, produced the disease. The observations made by us led to the conclusion that beri-beri is a disorder of metabolism, and that white (polished) rice, as milled by machinery on a large scale, commonly makes default in respect of some substance or substances essential

for the maintenance of the normal metabolism of nerve tissues. It was further shown that in the original grain these substances are contained in the cells of the subpericarpal layer which are removed in the process of polishing. As measures for the prevention of the disease it was recommended that, for the ordinary white rice in the diet, there should be substituted a rice in which the polishing process had been omitted or carried out to a minimum extent. These conclusions, first published in December, 1909, received the endorsement of the Far Eastern Association of Tropical Medicine at its meeting in Manilla in March, 1910, and practical measures, based upon them, are now being taken by the Governments of those countries where beri-beri most abounds.

During the past year attention has been directed towards the determination of the nature of the substances present in the subpericarpal layers of the original grain which are removed in the milling process and which, it would appear, are of such high physiological importance in maintaining normal nutrition, when a diet largely composed of white-polished rice is consumed. This research has not yet been completed, but thus far it has confirmed the accuracy of the work already recorded, and by a process of exclusion the problem has become appreciably less complex.

Introductory.

For the purpose of testing the value of the various materials fowls weighing 1200 grammes or thereabouts were employed. Each, as in previous experiments, was confined in a separate cage and, save in one instance, groups of 12 were used. The fowls received rice twice daily at 10 A.M. and 3 P.M., and when receiving polishings or materials prepared from polishings, the substance in question was given as an emulsion, by means of a stomach-tube, half an hour after the rice had been given. Every fowl was weighed once a week at 12 noon.

As a result of a series of former observations it had been determined that fowls weighing from 1200-1400 grammes required about 60 grammes of unpolished rice daily, and, if fed on 60 grammes polished rice, they required in addition 5 grammes of sifted polishings for the maintenance of weight and health. In a previous experiment where products derived from different lots of padi were employed, 3.5 grammes of the polishings were shown to be sufficient with the white rice then in use. In the present experiment all the products employed—unpolished rice, polished rice polishings, &c—were derived from the same lot of padi. For purposes of comparison the following results of analyses are given:—

—	Protein.	Fats.	Carbo- hydrates.	Ash.	Moisture.	P ₂ O ₅
	%	%	%	%	%	%
Polishings (sifted)	13.7	14.16	52.77	7.54	11.83	4.1
Unpolished rice ...	9.0	1.65	75.52	1.08	12.75	0.56
Polished rice ...	8.6	0.22	76.23	0.6	14.35	0.26

When the composition of these articles is calculated on dried materials the differences are rendered more striking and accurate, and when in a similar manner the composition of a diet made up of 60 grammes of polished rice and 5 grammes of polishings is calculated it will be seen how closely such a diet approximates to one of unpolished rice.

Calculated on Dried Materials.

—	Protein.	Fats.	Carbo- hydrates.	Ash.	P ₂ O ₅
	%	%	%	%	%
Polishings (sifted) ...	15.5	16.0	59.8	8.5	4.65
Unpolished rice ...	10.3	1.89	86.5	1.23	0.64
Polished rice ...	10.0	0.25	89.0	0.7	0.3
Ration 60 grammes polished rice plus 5 grammes polish- ings contains per cent. }	10.4	1.5	86.6	1.31	0.64

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Sifted polishings were invariably employed because polishings as received from the millers contain a considerable mixture of husk and broken rice.

Polishings when fresh are neutral in reaction, but on keeping they become acid. This change does not impair their efficiency, however, and polishings which have been stored with ordinary care for months are quite as valuable as the fresh materials. The ordinary process of cooking does not impair the value of polishing. For these reasons it is considered that the essential substance or substances are not unstable.

1. *Fat*.—Fat in the rice-grain is mostly confined to the sub-pericarpal layers. Unpolished rice is therefore richer in fat than polished rice, and polishings are very rich in fat. To determine the value of this fat a quantity of sifted polishings was packed in a percolator and percolated with petroleum ether. In this way the amount of fat in the polishings was reduced from 14.16 to 0.6 per cent. The fat-free polishings were dried by exposure to the sun until free from petroleum ether.

Twelve fowls were fed on polished rice and received in addition daily 4.5 grammes of fat-free polishings, being the approximate equivalent of 5 grammes of sifted polishings. The fowls remained healthy and maintained their weight just as had been the case when fowls received polished rice and sifted polishings. The non-importance of fat was therefore decided and its exclusion from the number of possibilities was of the utmost value since the fat had hitherto complicated our experiments.

2. *Phytin*.—Estimations of the percentage of phosphorus pentoxide in rices had consistently shown their value as indicators of the liability or otherwise of a given rice to produce polyneuritis. Thus the higher the percentage of phosphorus pentoxide contained in a rice, the less liable was that rice to produce polyneuritis when fowls were fed on it.

The unpolished rice, which we employed, contained 0.56 per cent. phosphorus pentoxide and did not cause polyneuritis. The polished rice contained 0.26 per cent. phosphorus pentoxide and invariably caused polyneuritis, while washed polished rice containing 0.22 per cent. phosphorus pentoxide was more harmful than the unwashed polished rice. This suggested the probability that the essential substance was one containing phosphorus. It was first stated by Dr. Hans Aron, Bureau of Science, Manila, that the substance in question is phytin, the calcium magnesium salt of an organic acid containing phosphorus. We estimated that the unpolished rice in use contained 1.07 per cent. of phytin, that the polished rice contained only a trace of that salt, and that the polished rice after washing and drying contained none. The sifted polishings contain 8.8 per cent. of phytin.

In testing the importance or otherwise of phytin we did not employ the commercial product because of our ignorance of its source and method of preparation, but prepared it ourselves in the following manner. Sifted polishings were mixed with 0.3 per cent. hydrochloric acid in the proportion of 300 grammes of the former to 2000 cubic centimetres of the latter, the mixture was stirred throughout the day, and on the following morning was filtered through a Buchner's filter. The clear yellowish filtrate was mixed with one and a half times its volume of 95 per cent. alcohol, which produced a white precipitate of phytin; the mixture was allowed to stand for a few days. The precipitate was collected, washed with strong alcohol to free it from acid, and dried in a vacuum desiccator. A friable cake of phytin was obtained readily reducible to a white powder, soluble in water, yielding an opalescent solution with an acid reaction and giving, on addition of sodium carbonate, a white flocculent precipitate. The powder contained 34 per cent. of phosphorus pentoxide.

A fowl consuming 60 grammes of unpolished rice daily would be receiving 0.66 gramme of phytin, and a fowl receiving the same amount of washed, polished, and therefore phytin-free,

rice would require to have in addition that amount of phytin daily in order to bring the value of this diet, in respect of phytin, up to that of an unpolished rice diet.

Twelve fowls received washed, polished rice, and in addition phytin, which was given in the following manner: 9 grammes of phytin were dissolved in distilled water, the solution neutralised with sodium carbonate, and the volume made up to 360 cubic centimetres. Each fowl received 15 cubic centimetres of this suspension at 10.30 A.M. and 3.30 P.M. daily, an amount of phytin slightly in excess of the estimated quantity. All the fowls lost weight and cases of polyneuritis occurred just as if the fowls had received washed, polished rice only.

In the next experiment 12 fowls received the phytin-suspension intimately mixed with the washed, polished rice, but the results were the same, and the importance of phytin was by these experiments definitely disproved.

3. *Substances soluble in 0.3 per cent. hydrochloric acid.*—Experiments were next carried out to determine if, when polishings are macerated in 0.3 per cent. hydrochloric acid, the essential substance or substances pass into solution. This solvent was chosen as it had been employed for the extraction of phytin. Polishings in quantities of 180 grammes, being the amount required by 12 fowls in three days, were mixed with 1000 cubic centimetres of 0.3 per cent. hydrochloric acid stirred during the day, and the following morning filtered through a Buchner's filter. 100 cubic centimetres of 0.3 per cent. hydrochloric acid were used to wash out the vessels. When fluid could no longer be extracted from the mass it was mixed with 600 cubic centimetres of 0.3 per cent. hydrochloric acid, stirred during two hours, and thereafter filtered as before. The extracted polishings were mixed with distilled water, nearly neutralised with sodium carbonate, and the volume was adjusted to 1080 cubic centimetres. 30 cubic centimetres of this emulsion contained 5 grammes of polishings, less the materials dissolved out by the acidulated water. The combined filtrates

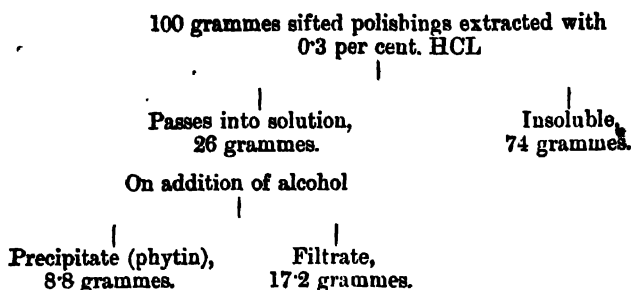
obtained from 180 grammes of polishings were nearly neutralised with sodium carbonate and concentrated at a low temperature to a volume of 1080 cubic centimetres. 30 cubic centimetres of this suspension contained the substances dissolved out by acidulated water from 5 grammes of polishings.

Twelve fowls were fed on washed, polished rice, each receiving daily 30 cubic centimetres of the emulsion of extracted polishings; cases of polyneuritis occurred.

Twelve fowls were fed on washed, polished rice, each receiving in addition 30 cubic centimetres of the suspension of dissolved substances; cases of polyneuritis did not occur. Therefore the essential material was removed and uninjured by the process of extraction and subsequent treatment. By this process of extraction 88 per cent. of the phosphorus pentoxide contained in polishings is dissolved out. Of this amount, 73 per cent. is represented by the phytin in the solution, so that together with the 12 per cent. remaining in the polishings after extraction, 85 per cent. of the phosphorus pentoxide contained in polishings is shown to be unimportant.

100 grammes sifted polishings yield 4.1 grammes P_2O_5	
Dissolved out by 0.3 per cent. HCL, 3.6 grammes, or 88 per cent.	Remains in polishings, 0.5 gramme, or 12 per cent.
On addition of alcohol	
Precipitate (phytin), 3 grammes, or 73 per cent.	Filtrate, 0.6 gramme, or 15 per cent.

4. *Alcohol (proof spirit) soluble fraction of the substances originally soluble in 0.3 per cent. hydrochloric acid.*—When 100 grammes of polishings are extracted in the manner described, 26 grammes pass into solution, and of that amount 8.8 grammes are precipitated on the addition of alcohol. Therefore, in the alcoholic filtrate which contains 17.2 grammes of the soluble substances obtained from polishings the essential material should be contained.



Experiments were next carried out to test the accuracy of this suggestion. Polishings in quantities of 180 grammes were treated as in the previous experiment, and the combined filtrates from each 180 grammes were mixed with one and a half times their volume of 95 per cent. alcohol. After standing for two days the precipitate was filtered off, dissolved in warm distilled water, nearly neutralised with sodium carbonate, and the volume adjusted to 1080 cubic centimetres of this suspension contained the alcohol precipitable substances (phytin) from 5 grammes of polishings.

Six fowls were fed on washed polished rice and received daily 30 cubic centimetres of this suspension of phytin. Cases of polyneuritis occurred, thus confirming the accuracy of the previously recorded experiments which proved the unimportance of phytin.

The alcoholic filtrate was nearly neutralised with sodium carbonate and evaporated at a low temperature until free from alcohol. The residue was diluted with distilled water to a volume of 1080 cubic centimetres. 30 cubic centimetres of this suspension contained the almost phytin-free soluble substances from 5 grammes of polishings.

Six fowls were fed on washed polished rice, and each received daily 30 cubic centimetres of this suspension. All remained healthy.

These experiments prove that of 5 grammes of sifted polishings required daily for the maintenance of weight and health in a fowl on a white polished rice diet, no less than 4.2 grammes

are unimportant, and of the 0·8 gramme remaining probably only a part is essential.

—			Effect on fowls; esti- mated by occurrence of poly- neuritis.	Estimated percentage of fat in diet.	Estimated percentage of P_2O_5 in diet.
Unpolished rice	—	1·65	0·56
Polished rice <i>plus</i> polishings	—	1·3	0·55
Polished rice	+	0·22	0·26
Washed polished rice	+	0·22	0·21
Washed polished rice <i>plus</i> fat- free polishings	—	0·25	0·51
Washed polished rice <i>plus</i> polish- ings	—	1·3	0·51
<i>Polishings Extracted with 0·3 per cent. HCl.</i>					
Washed polished rice <i>plus</i> ex- tracted polishings	+	1·3	0·23
Washed polished rice <i>plus</i> extract	—	0·22	0·47
<i>Extract Mixed with 1½ times its Volume of 95 per cent. Alcohol.</i>					
Washed polished rice <i>plus</i> pre- cipitate (phytin)	+	0·22	0·41
Washed polished rice <i>plus</i> filtrate	—	0·22	0·24

Summary and Conclusions.

1. White polished rice when forming the staple of the diet in man has been shown to cause beri-beri.

2. Such white polished rice when fed to fowls produces in them a disease closely analogous to beri-beri in man. This reaction has been taken in this, and previous researches, as a test of the beri-beri producing power of a given rice when it forms the staple of a diet in man.

3. The addition of rice polishings to a diet of white rice is an effective preventive of the development of polyneuritis in fowls. Rice polishings comprise from 8 to 10 per cent. by weight of the original grain.

4. The substances contained in polishings which are effective in preventing polyneuritis are soluble in 0.3 per cent. hydrochloric acid, and are not precipitated from the solution on the addition of 95 per cent. alcohol in quantity sufficient to make the resulting mixture of proof-spirit strength. These substances comprise 16 per cent., or less, by weight of rice polishings, or 1.6 per cent., or less, by weight of the original unpolished rice grain.

5. The fats which are contained in rice polishings in comparative abundance have been proved of no importance in preventing polyneuritis.

6. Phosphorus compounds equal to 85 per cent. of the total phosphorus content have been proved to be unimportant preventing polyneuritis.—The *Lancet*, December 17, 1910.

EDITOR'S NOTES.

Suicides of Children.

Dr. Cridenberg is investigating the causes of many such cases that have of late years occurred in Russia; his statistics show these causes to be exceedingly varied, ranging from an "American duel" to so trivial a matter as a lost knife or a broken saucer. In one year 436 children in the Government schools committed suicide; most of these children left letters, from which their reasons may be classed as: owing to nervous diseases, 24 per cent.; reasons too vaguely stated to enable classification, 22.3; trouble with teachers and fear for result of examination, 21.8; family quarrels, 15.2; various misunderstandings at home or in school, and other causes, 16 per cent. The relation between the attitude of the Government toward the people and child suicide, is pointed out. In Petersburg, in 1903, before the revolution, there were 113 cases, in 1905, during the revolts, 46; in 1906, when the Government began to get the upper hand, 77; in 1907, when representative measures were in full force, 151. Cridenberg considers that reaction and child suicide go hand in hand.—The *Medical Times*, December, 1910.

Preventive and Curative Treatment of Beri-beri.

At the November meeting of the Societe de Pathologie Exotique M. Breaudat and M. Denier reported that in the epidemic of beri-beri which occurred at Cape Saint Jacques from June 1909 to April 1910, they had treated patients with the outer covering (*son*) of paddy, which corresponded to the bran of European cereals. They came to the conclusion that in this epidemic the disease presented both the dry and the dropsical form with a predominance of cardiac symptoms. The above-mentioned product obtained from paddy did not in general cause any digestive trouble. It was used both for prophylaxis and also as a remedy. For the former purpose it was given in doses of 40 grammes per day, and principally to the detachment of tirailleurs, on whom it had a well-marked protective influence, but in the case of men who were already suffering from the disease it did not seem to produce any effect. Used as a remedy in doses of 40 grammes and upwards, without any other medicinal treatment and without any change in the food given to the natives, its results were identical with those of the numerous therapeutic agents hitherto recommended in association with a European *regime*, while it possessed the advan-

tages over the latter of being simple, cheap, and always obtainable by the natives.—The *Lancet*, January 7, 1911.

A Clean Milk Campaign.

In order to consolidate public opinion in readiness for the time when general legislation will be introduced for the purification of our milk, a joint committee of the National League for Physical Education and Improvement and the National Health Society has prepared and issued three leaflets, addressed to farmers and producers, to distributors and retailers, and to housewives and all consumers of milk respectively. They are brief, clear and concise, and having been prepared by a committee, including representatives of the medical, veterinary, and legal professions, of the Local Government Board, local authorities, and farmers and dairymen, the directions and advice given may be taken to be both soundly scientific and practical. Much attention has lately been directed to the purification of the milk-supply, and local authorities have obtained and are using powers to trace to their source certain forms of milk contamination, notably tuberculosis. In addition to these special powers all local authorities have the power and duty of compelling cleanliness in dairies, cowsheds, and milkshops, ensuring as far as possible freedom from contamination until the milk is in the hands of the consumer. These measures often fail in their effect through lack of public opinion to support them, and they are in many instances rendered futile by the ignorance and carelessness of consumers. It is important to success that vendors should realise that the reputation for clean milk is essential to their own interests, and such admirable rules as the suspension from duty for considerable periods without loss of wages of dairymen in whose homes infectious diseases have arisen should lead the public to patronise those dairy companies which make and keep them. Such a rule is itself a guarantee that the other precautions necessary for obtaining uncontaminated milk are carried out in these establishments. When Bills have been passed, and supervision of production and control of distribution have been obtained, the problem will still remain of educating the consumer, and it is to such national societies as these, which have prepared and are circulating advice and information among the people, that the lot will fall of overcoming the last line of resistance to a purer milk-supply.—The *Lancet*, December 17, 1910.

Thermo-anæsthesia in Zona.

At a recent meeting of the Société Médicale des Hôpitaux M. Ramond said that from observations made on 43 cases of primary zona at the Hôpital de la Pitié and the Hôpital Saint Antoine he had found that, in addition to the well-known disorders of sensation, there was almost constantly a condition of thermo-anæsthesia which might persist for several months. Half of the cases also presented the condition of bulbo-capillary reflex, or "gooseskin," a phenomenon which could be easily elicited by rubbing the skin of the affected part with the finger-nail. Moreover, in three cases there was glycosuria for periods varying from 7 to 15 days, and in one case there was obvious polyuria with or without frequent micturition, just as in certain forms of sciatica. The best treatment for the pains which outlasted the eruption seemed to be the injection of sterilised air.—*The Lancet*, January 7, 1911.

Epidemic Plague in Man.

(a) Bubonic plague is not directly infectious from man to man, as is shown by the experience of plague hospitals, where there is no tendency for the disease to spread from the sick to the attendants.

(b) Material epidemics of plague in man are always associated with epidemic plague in rats. Epidemic plague among rats provides a large number of infected rat fleas, and, owing to the mortality among the rats, brings these fleas on to human beings.

(c) Rat fleas (*Pulex cheopis*) bite human beings, especially in the absence of their natural host.

(d) Rat fleas containing plague bacilli and found capable of transmitting plague to animals may be caught in plague-infected houses.

(e) Animals susceptible to plague (guinea-pigs, monkeys) placed in plague-infected houses if unprotected from fleas may contract the disease; whereas such animals under the same circumstances remain free from plague if protected from fleas.

(f) The Commission has also performed numerous experiments with a view of testing other possible modes of infection, and have found that—

(i) In the absence of fleas no epidemic resulted when animals susceptible to plague (guinea-pigs) were kept in close contact with infected animals, although the animals took their food off floors grossly contaminated by the excreta of their infected companions.

(ii) Susceptible animals (guinea-pigs) caused to live upon and feed off floors artificially saturated with plague cultures failed to contract the disease.

(iii) The excreta of plague-infected patients may contain plague bacilli, but the bedding, etc., of plague patients soiled with excreta containing plague bacilli was not found to be infective to highly susceptible animals caused to live in and upon the bedding.

The Advisory Committee for Plague Investigation in India, therefore, consider that *in the great majority of cases during an epidemic of plague, man contracts the disease from plague-infected rats through the agency of plague-infected rat fleas.*—*The British Medical Journal*, November 26, 1910.

Theodor Schwann.

On December 7th, 1810, there was born at the old city of Neuss, on the left bank of the Rhine, Theodor Schwann, whose name is imperishably written in the history of biology as the founder of the cellular conception of living organisms—a conception which, developed as it was later by Virchow, has done so much to advance our knowledge of living organisms both in health and disease. Schwann studied in Bonn, Würzburg, and Berlin. At the last-mentioned place he came under the influence of Johannes Müller, and he was afterwards for five years assistant in the Berlin Anatomical Institute. During this time he was very closely associated with Müller and with Jacob Henle, and also during part of the time with Matthias Jacob Schleiden. His first original work was a thesis for his doctorate on the subject of the respiration of the developing chick within the egg—a research which was carried out at Müller's suggestion. The five years spent at Berlin proved remarkably fertile in research. Schwann investigated the chemistry of gastric digestion, discovering pepsin and its ferment action. He then carried out researches into the phenomena of fermentation and putrefaction. He demonstrated that fermentation and putrefaction were vital manifestations of lowly vegetable organisms and that "spontaneous generation" was not to be accepted. It is worthy of note that this achievement of Schwann has always been credited to him, while his anticipation of certain of Pasteur's work has been overlooked or forgotten. Researches on the power of contraction of muscle fibres, on the elastic tissue of the arterial walls and other organs followed. He studied the structure of

striated and non-striated muscle, and also that of nerve fibres, as the sheath which is called after him still serves to recall. His greatest work was, however, the book published in March, 1839, on "Microscopical Researches into the Agreement in the Structure and Growth of Animals and Plants," an octavo volume of 270 pages, with four copper plates. In 1839 he was called to the Catholic University of Louvain to fill the chair left vacant by the early death of K. J. Windischmann. Afterwards he was called to the University of Liege, and for 40 years he worked in Belgium, though during this period only one scientific work of any magnitude was published by him, as he appears to have devoted his time to the teaching of anatomy, physiology, and comparative anatomy. He died on Jan. 11th, 1882, while on a visit to his brother at Cologne. Schwann's great work in regard to the cellular conception of animal tissues is often wrongly interpreted. It is usually stated that Schleiden discovered plant cells and Schwann those of animal tissues. Certain cell forms had been described before either of these investigators brought forward their results. Müller had described the cells of the notochord and of cartilage and Henle the epithelial cells on free surfaces. Schwann multiplied these instances and then elaborated Schleiden's view of vegetable cells developed around the nucleus to a general morphological conception of the cellular structure of the whole animal organism. He also enlarged and modified the conception of the cell, and recognised the importance of the nucleus as an essential in its structure. The organism as a whole was thus to be regarded as an aggregate of morphologically similar and equivalent cells. It was therefore no longer possible to speak of a basic vital force within the organism and Schwann's work gave the final blow to the theory of vitalism. During the decade after the publication of his book the researches of Purkinje, Kölliker, and Remak established the general truth of Schwann's view, while bringing to light fresh facts requiring modification in the conception of cellular structure. The fundamental nature of the cell in biology is now so elementary a fact, and the study of cytology has advanced to such a degree, that it is a little difficult to realise that its discovery is so comparatively modern. The centenary of Schwann's birth should be of interest to all who have studied the history of medicine, for his work was truly epoch-marking.—The *Lancet*, January 7, 1911.

Gleanings from Contemporary Literature.

ANCIENT HUMORISM AND MODERN HUMORISM.

DELIVERED AT THE INTERNATIONAL CONGRESS OF PHYSIOLOGY HELD IN
VIENNA, SEPTEMBER 27TH TO 30TH

BY CHARLES RICHEL, M D.,

Professor of Physiology, University of Paris.

I.

WHEN, after an interval of three years, our family of physiologists finds itself once more gathered together in formal congress, as we are at the present moment, we have many things to say to each other, and as the intensity of physiological research is considerable, it will be necessary to mention the definite progress that has been made after three years of labour. At this, our first meeting, therefore, it would be fitting that the new facts discovered by physiologists should be set before you. When, therefore, our illustrious President did me the great honour—an honour for which I am profoundly grateful to him—of selecting me as the first speaker, I first thought of giving you a brief account of the work accomplished since 1907. But very quickly I realized that such an account, even if I were capable of giving it, which is very doubtful, would be more like an analytical review than an academic discourse, and would be more of the nature of a book than of a speech.

Therefore I thought it wiser, though equally rash, to furnish, instead of a technical and bibliographical analysis, a more synthetic study—a general sketch of the tendencies of contemporary physiology.

II.

Just as the traveller in the course of his journey, after having accomplished a fairly long stage, stops for a moment to look backwards and forwards, measuring with his eyes the distance he has covered and that which remains for him to traverse, so we, too, may ask ourselves what point we have reached and from what point we started. It is our right, our duty even, to seek in what direction is proceeding the evolution of the science which is dear to us—physiology—that science so useful in contributing to the welfare of mankind, to which all of us here present consecrate our teaching and our researches.

Now, it seems to me, upon reflection, that the physiological concepts of to-day might very well be expressed by a very old word, now perhaps a trifle out-of-date, "*humorism*." All of us at this present moment are, consciously or unconsciously humoralists—that is to say, we look upon the chemical constitution of our humours as being the basis of all biological phenomena; and we understand that word "*humour*" in the most general sense, for we not only think of the circulating or secreted humours, such as the blood, the bile, the milk, the urine, and gastric

juice, but also of the liquids which enter into the composition of our tissues; in other words, of all the chemical substances in solution of which the living organism is composed. It is by the chemical evolution of the substances contained in the plasmatic liquids that life is constituted.

And in conceiving life under this form we are only following a very ancient tradition. From the earliest times the composition of the humours has been regarded as of fundamental importance. Humorism had pre-occupied not only physiologists, but also, and especially, physicians. For physicians have always been a little more theorists than physiologists, though the theories of medicine are always the direct outcome of physiological opinion. At all times, and perhaps more than ever to-day, physicians seek both their theory and their practice in the teaching of physiology. It matters little whether they acknowledge this or not; they follow the impulse that experimentation gives to the biological sciences. We are the creators, the innovators, the revolutionaries, and they conform to our conceptions. So much better if these conceptions are right. So much the worse if they are wrong. Medical theories are always the reflection of contemporary physiological theories.

It is not surprising, therefore, that the word "humorism" applies as much to medical as to physiological ideas. The physicians of the past were humoralists because the physiologists were so also. And as the physiology of the present day is essentially humoralist, modern medicine is necessarily so too, even at the risk of exaggeration. Medicine and physiology are merged in one another. Hippocrates, Galen, Van Helmont, the masters of humorism, did not think it necessary to separate the theories of life from the theories of disease.

And we must follow their example energetically, resolutely. There are not two biologies, that of the sick man and that of the healthy man. The laws are the same. We have a right to claim all the admirable work of contemporary experimental pathology as a part of physiology. I know very well that experimental pathology and physiology are taught from different chairs. But we admit that that fact is not of the least importance. The method is the same; the object is the same. The method, everywhere and always, is the experimental method; the object is, everywhere and always, the knowledge of biological phenomena.

III.

The humorism of the ancients is very singular. According to Hippocrates, and—but for some slight shades of difference—according to Galen, life depends upon the humours. When they are in the right condition we have health; when they are corrupted we have illness. Nothing, you see, can be simpler.

What are these humours? Strange to say, Hippocrates, Galen, and all the physicians who followed them during sixteen centuries, describe humours which they had never seen, and which no one will ever see, for they do not exist. There was the blood, the yellow bile, the black

bile, and the phlegm. The blood and bile have certainly an actual existence ; but where is the black bile, which causes melancholy ? And this extraordinary phlegm or pituitary secretion—this strange liquid, which is the cause of tumours, of chlorosis, of rheumatism, and cacoehymia—where is it ? Who will ever see it ? Who has ever seen it ; What can we say of this fanciful classification of humours into four groups, of which two are absolutely imaginary ?

It was not until the advent of the great anatomists of the sixteenth century that the science of life emerged from the clouds in which it was enwrapped ; it was not until the time of Harvey and Descartes that experiment triumphed over book learning. But what is truly extraordinary, what surpasses our wildest dreams, is the fact that for sixteen hundred years all physicians and all physiologists remained bound in the shackles of this incomprehensible error of the four cardinal humours. By what miracle was the spirit of conservatism or of routine able to hide the truth to such a degree ? The men of science and the doctors of former times were no less intelligent than those of to-day. Nevertheless they accepted without a shadow of proof these childish theories ; they could not see most simple facts, and they saw most complicated things which not only did not exist but which were not even probable. Is there not reason to be a little uneasy as the fate reserved for our own work ? Have we any assurance that our own conceptions will not be treated with contempt by our successors four hundred years hence ? It is, therefore, prudent not to be too hard upon the past, because thus we may predispose those who come after us to show us a little indulgence.

With the Italian anatomists of the Renaissance, the orientation of physiology changed, in spite of the impotent efforts of Van Helmont ; humorism was replaced by mechanism. It was thought that anatomy should be the guide of its servant, physiology. The dissection and opening of corpses became the basis of medicine and physiology. With the coming of Willis, Wiuslow, Morgagni, humorism was almost abandoned. And, after all, this was but just. How could it have any appearance of truth, since chemistry was not yet born ?

It came into being, as you know, with Lavoisier, and with chemistry came medicine and physiology. The more I study the history of physiology the more do I look upon Lavoisier as the great initiator. It is useless to describe here his immense work. I will content myself with indicating it in a sentence that sums it up. Lavoisier understood, discovered, and demonstrated that life is a chemical phenomenon. At once all was clear. One understands the cause of animal heat, the *raison d'être* of respiration and alimentation ; one grasps the meaning of energy ; one applies the great principle of the transformation of the forces to general biology ; and one can plainly foresee that humorism will triumph, and that the chemical transformations of which the organisms are the seat will be merged in the vital principle, which itself

will have become superfluous. In spite of Galen, Descartes, Harvey, Haller,*physiology begins with Lavoisier.

IV.

Nevertheless, the great scientific revolution which gave birth to chemistry did not immediately bear fruit. There were periods of uncertainty and hesitation, during which physiology and medicine, its faithful companions throughout the glorious nineteenth century, so fertile in discoveries, have oscillated, not knowing exactly from what side light was to come. And in fact, just as the anatomists of the Renaissance guided biology from the side of dissection, so the micrographers, with their more and more perfected microscopes, have appeared to draw physiology towards histology, histogenesis and cellular morphology. Now, even if magnificent discoveries have been made as to the structure of cells ; if it has been found possible to describe their forms, and the transformations of their granules ; if, finally, it has become possible to consider the cell, which appears so simple an element, as an extremely complicated world in itself, nevertheless it seems to me that all this progress in morphology has done nothing towards elucidating questions of physiology. The greatest physiologists, on various occasions, have laid stress on the inadequacy of anatomy—even the most delicate microscopic anatomy—to elucidate the modality of the functions. This was one of the ideas dear to Magendie, and especially to Claude Bernard, who never tired of repeating that histology can do nothing, or next to nothing, for physiology, and that the knowledge of a form in nowise implies the knowledge of a function. It seems to me that one cannot possibly exaggerate in this direction. Even if we are able to describe minutely the form of a cell and the complicated network of the different granules which constitute it, we shall not have got much further towards knowing its proper function. Granted that a nerve cell contains two or three groups of matter which will take a different stain, how does the knowledge of that fact help us to know the quantity of oxygen it consumes, to determine the conditions of reflex action and the laws of its irritability ? Let us suppose that we have fathomed the structure of the muscular fibre, what will it teach us of muscular contraction ?

Happily physiologists have not allowed themselves to be misled by the mirage of the microscope ; they have studied physiology as physiologists, not as histologist ; by chemical and physical experimentation, not by morphology. It is evident that neither Claude Bernard, Helmholtz, nor Ludwig refused to admit the use of it ; but they always declared that its use was limited. They always preferred experiment to observation. They always preferred to analyse a function rather than to describe a form. It is for this reason that they made such noble discoveries, for the histology of an organ does not by itself lead to the discovery of the function of that organ.

V.

But medicine has not been as wise as physiology. It believed that

microscopic anatomy, normal or pathological, was going to clear up everything, and we are forced to admit that it has hardly derived any profit at all therefrom. The whole history of cellular pathology, despite the genius of Virchow, has ended in a rather lamentable failure. Two or three of Pasteur's experiments have done more towards the renovation of medicine than fifty years of pathological anatomy.

And if I speak of Pasteur, of his glorious successors, R. Koch and Ehrlich, as I might speak of the eminent bacteriologists of the present day, it is because experimental pathology becomes mingled with pathological physiology, though not with morbid anatomy. It is not the microscopic observation of forms that has given us these marvellous discoveries by means of which the medicine of the past has been completely overthrown. Every branch of medicine has been regenerated—etiology, pathogeny, hygiene, therapeutics. It has been a revolution without precedent in the history of science. And this progress is due solely to experimentation—that is to say, to the methods of the physiologists. The morphology of bacteria is of little importance compared with the biology of bacteria.

Nevertheless, at the beginning of bacteriology, it seemed as though there was to be a definitive movement away from humorism. But important discoveries very quickly showed that, even for the study of microbes, it was necessary for the application of phenomena to come back to biológico-chemical analysis—that is to say, to humorism—for the understanding of microbes.

First came the fine discovery of Roux, which proved that the symptoms produced by the living and developing microbes are more or less identical with the symptoms caused by chemical substances which contain microbes. By injecting the soluble products contained in the microbes of diphtheria, the symptoms of that disease, which is due to the multiplication of diphtherial microbes, are reproduced. Some time afterwards I showed, in conjunction with Héricourt, that there are in the blood chemical substances capable of producing immunity. This was the principle of serumtherapy, which was so brilliantly applied by Behring two years later to diphtheria. And on all sides, with admirable enthusiasm, both doctors and physiologists, without stopping to ask if their work belonged to the domain of medicine or to that of physiology, studied the chemical functions of the blood, and have discovered in it manifold properties, the complexity of which increases every day. This is humorism in the strictest sense of the word.

You see, therefore, that although physiology has from the beginning been attached to humorism, medicine oscillated for a long time between contrary tendencies, leaning turn by turn towards anatomy, histology and bacterial morphology, but finally reverting to humorism, following the way pointed by the physiologists.

VI

It is hardly necessary to point out that this modern humorism differs

profoundly from the humorism of the ancients. In order to make you better understand the abyss which divided contemporary science from the conceptions of the past, I should like to show you in a very simple form—which I will try to present under the form of laws—the principal data of the humorism of to-day. To tell the truth, I reproach myself a little for using so pretentious a word as “laws.” They are not laws, but rather generalizations of facts. It is no longer, as in the days of Hippocrates and Galen, a question of more or less undemonstrable theories, but rather positive facts, demonstrated and incontestable.

The first law is the following; it is founded on an incalculable number of facts :

The quantities of substances which come into play in physiological reactions are often in such minute proportions that they may be called imponderable.

This, first of all, calls for a definition of that which is ponderable. The limit of it is shown by the delicacy of our balances. One can weigh with a certain degree of exactitude a tenth part of a milligram, though that itself is a sufficiently delicate measure; but further we cannot go, and when we have to do with a hundredth part of a milligram, we have no means of determining such a weight. All the same, we are able to speak of a hundredth part, a thousandth part, a millionth part of a milligram; because, by dissolving a milligram in a litre, we get a thousandth part of a milligram in a cubic centimetre; by dissolving it in a cubic metre, we get the millionth part of a milligram in a cubic centimetre. But no chemical reagent, however sensitive, can reveal the presence of this infinitely minute amount. Nevertheless, certain physiological reactions allow us to demonstrate the action of these prodigiously diluted substances. I will give you some examples.

VII.

In seeking to discover the action of metallic salts on the acid fermentation of milk—a transformation of lactose into lactic acid—I have been able, by the use of very delicate acidimetric processes, to measure very minute differences between the quantities of acid contained in the fermented liquids. For example, I have been able to determine that in certain milks the quantity of acid was 100, and in others 100.5. This slight difference would signify nothing if one were content with analysing two flasks: the Flask A has 100, the Flask B 100.5. Manifold influences, impossible to determine with exactitude, may easily have slightly accelerated the process of fermentation in the flask of which the acidity is 100.5. But if, instead of using only two flasks, I use 2,000, —1,000 flasks of Milk A and 1,000 flasks of Milk B—, and if I find almost invariably that there is a difference of 0.5 per cent. between Milk A and Milk B, I am warranted in concluding with absolute certainty that there is in the flasks containing the Milk B an influence which is not negligible, and which accelerates the fermentation.

It is in this way that I have been able to establish that sometimes quantities of metallic salts corresponding to the frightfully small dose of the ten-millionth of a milligram per litre (in the case of the vanadium salts, for instance), were not without some effect on the lactic fermentation. This figure is altogether extraordinary, for the ten-millionth of a milligram exceeds in infinity all that we are accustomed to take into consideration.

Nevertheless, the lactic ferment is discernible, distinctly discernible, in this amazing dilution, and as there is in a litre which is fermenting a hundred thousand milliards of cells, and perhaps more, it follows that the quantity of vanadium which acts on each cell is indicated by a fraction of a gram so small that twenty-five zeros would be needed to express it. All metals act almost in the same way as vanadium, notably thallium and barium. One may, therefore, ask oneself, is it a case of chemical action or of an action more or less analogous to that of radium. My lamented friend P. Curie formerly gave me a little radium emanation, that is to say, a gas in such small proportion that it is imponderable (one is not even yet certain that this emanation is a gas); in any case it has been possible to mix this emanation, already greatly diluted when Curie gave it to me, with 1,000 times its volume of air without its ceasing to exert an action on the lactic ferment. There is, therefore, ground for asking oneself if this action of the diluted metallic salts, that of the emanation of radium, to which the action of mineral waters is now compared, is chemical or physical. Is there not a transformation of energy? When the chemical action is transformed into other energies it becomes in certain cases perceptible to our senses even when it is very slight. Thus the light of a bright acetylene flame during one second represents only 1 cg. of carbon; nevertheless, it is perceived at the distance of 1 kilometre, that is to say, over an area of a square centimetre, making part of a sphere, the radius of which is 1 kilometre. The very minute quantity of luminous energy set free by the thousand-millionth part of a milligram of carbon is still perceived by our retina.

In truth nothing permits us to suppose that these phenomena are not chemical; for we do not know the limit of the sensitiveness of living cells to chemical action. All that we can say is that the cells are extremely sensitive to chemical excitations. I can give you some examples of this.

It cannot be supposed that the olfactory sensibility is due to an excitation which is not chemical in nature. An odour is perceived when some particles of material substance come in contact with the olfactory mucous membranes, and this contact is necessary. But what infinite smallness! How calculate the quantity of matter that a hare leaves behind it in crossing a field? Nevertheless, it is enough to enable a dog to find the scent two hours later. Berthelot proved that in making a sufficiently rapid current of air pass over iodoform the smell of the iodoform is very distinctly perceived in the air that has passed. Nevertheless, the weight of the iodoform remains almost the same, although

its smell is perceived in each one of the millions of litres that have been in contact with it. Berthelot was accustomed to cite another fact of the same order, but of rather uncertain interpretation. When one rubs copper lightly a certain characteristic odour is liberated, and yet the copper does not lose in weight.

M. Engelmann made a very curious experiment. Certain infusoria contain in their cells some granules of chlorophyll. Now if these infusoria are made to live in a liquid containing bacteria, and they are exposed for only a second to a ray of the sun, at once all the bacteria are seen precipitating themselves towards the chlorophyllian infusorium. This is because the infinitesimal quantity of chlorophyll exposed to light during a second has decomposed a particle of the dissolved carbonic acid and liberated oxygen which attracts bacteria. And, of course, in such a case we have to do with an imponderable quantity. But this quantity has been sufficient to make the bacteria precipitate themselves with violence towards this thousand-millionth part of a gram and a still smaller quantity of oxygen that has been given off.

The quantities of iodine found in the blood are in such small quantity that they cannot be measured. Often even one cannot detect any trace, and nevertheless, this iodine which is found in imponderable proportions in the blood, may be—perhaps by the thyroid body—separated, isolated, accumulated, so that there is an iodine combination in the gland.

And as regards adrenalin secreted by the suprarenal glands and certainly poured into the blood, in what infinitesimal doses is it found in the blood of the suprarenal veins !

All chemiotaxis reveals to us the action of infinitesimal quantities. And in this chemiotaxis the history of the spermatozoa is of quite special interest. If they are attracted towards the ovum, that is assuredly by a chemiotactic force, and direct experiment proves that they are extremely sensitive to the weakest chemical action. If they are placed in contact with a drop of acid diluted to one-thousandth they are at once attracted. Now they move only because there is a difference of acidity between the quantity of acid found in the head and that in the tail of the spermatozoon ; and this difference, if one thinks of the smallness of the cellular organism, exceeds in minuteness all that we can imagine.

In passing, it may be mentioned that embryology, which had hitherto remained a science almost entirely morphological, in which it might seem that humorism played no part, has now also entered on its humoral period. And forthwith great results have been obtained. The admirable researches of Delage have established the fact of chemical parthenogenesis, and the chemical—or osmotic, which is almost the same thing—influence of certain metallic salts even greatly diluted on the maturation of the ovum. So that chemistry—that is to say, humorism—dominates the penetration of the spermatozoon into the ovum, due to chemiotactic affinities as well as the maturation of the ovum and its embryogenic development. The chemical laws which govern the life of the adult also

govern his birth. Certainly one is astonished when one sees a single cell by its proliferation becomes the origin of the immense aggregation of diverse cells which makes up the adult. But astonishment is still greater if one reflects that this development is the result of a chemical conflict of substances altogether specific—since fecundation does not occur between different species—substances the absolute quantity of which is so small that it exceeds the limits of our understanding.

Experimentation with toxins furnishes us with examples just as remarkable.

Allow me in connexion with this to speak to you of a fact which I discovered some years ago, and which I called *anaphylaxis*. Thanks to the ardour and talent with which on all sides this new law of general physiology has been studied, it has assumed a great importance in physiology, and especially in pathology.

Anaphylaxis is the opposite of protection (phylaxis). If one injects an albuminoid substance—for example, a toxin—into the circulatory system of an animal, instead of being protected by this first injection against a further injection of the same toxin, it has become more sensitive to its action. Let us suppose that the fatal dose is 1 cg. The injection of a tenth part of that dose—that is to say, 1 mg.—will not make it at all ill, or scarcely so. But a month later—for almost a month is required for the anaphylactic state to be produced—it has become so sensitive that a dose of 1 mg. is enough to kill it by the immediate production of formidable symptoms. Therefore the first injection has caused a condition which is the opposite of protection—namely, anaphylaxis.

The sensibility of certain animals, notably guinea-pigs, to this first injection, which produces the anaphylactic condition, is altogether extraordinary. Two American physiologists, Rosenau and Anderson, have made a curious experiment on this point. They inject guinea-pigs with a very inoffensive serum, namely, horse serum; and they have satisfied themselves that horse serum has sometimes an anaphylactic effect in the inconceivably small dose of one-hundred-thousandth part of a cubic centimetre. In other words, a guinea-pig which a month before received the hundred-thousandth part of a cubic centimetre of horse serum, is never again altogether the same as a normal guinea-pig. If at the end of a month it receives another injection of a dose of horse serum, perfectly harmless to a normal guinea-pig, this will kill it in a few minutes. Now, the chemical albuminoid substance in horse serum which produces anaphylaxis is probably in very small proportion; it perhaps contains only one-thousandth part of the active substance, perhaps even less; in any case we learn from this curious experiment that a thousand-millionth part of a gram is still an active—a very active—quantity.

Another American physiologist, Dr. Vawghan, has succeeded in extracting from ovalbumin a chemical substance, both albuminoid and crystallizable, which produces anaphylaxis when given in a dose of a thousand-millionth part of a gram.

Anaphylaxis is not the only way in which the influence of these infinitesimal quantities of substance is manifested. The history of haemolysis, which the splendid work of Hamburger, Bordet, and many others has made so precise, shows very clearly that the most minute proportions of certain definite chemical matters possess a powerful activity.

The injection of a toxin produces an antitoxin (the active substance of anaphylaxis), and these antibodies and toxogenins are almost absolutely specific. But this is not the most curious feature of their history. To every antigen there is a corresponding special antibody. To the diversity of antigens correspond the diversity of antibodies secreted. The tyrosine of vegetable origin and the tyrosine of animal origin appear identical, and yet, as my friend C. Gessard has shown, vegetable antityrosinase is not the same thing as animal antityrosinase. Nothing can give us a clearer idea of this rigorous specificity than the application of anaphylaxis to medico-legal research.

M. Uhlenhuth has made some very conclusive experiments on this subject. Nine guinea-pigs receive injections of some drops of blood, of unknown origin (man, dog, rabbit, ox, horse, sheep, tortoise, fowl, or guinea-pig). A month later each of these guinea-pigs receives an injection of serum (man, dog or rabbit, etc.). Let us suppose that one animal dies, the one injected with the blood of a horse. From this we may conclude with absolute certainty that the blood of unknown origin which was injected into the guinea-pigs a month earlier was that of a horse.

In connexion with this subject a somewhat amusing experiment has been made. A watery extract of various tissues from an Egyptian mummy over 3,000 years old was made and injected into guinea-pigs, and a month later it was found that these animals had been made anaphylactic by means of human albumin; which justifies us in drawing the conclusion—otherwise very probable—that the chemical constitution of the human being 3,000 years ago closely resembled the chemical constitution of man to-day.

I could cite many other facts, but I think I have said enough to convince you that very small quantities of substance possess a considerable biological activity. I prefer to try to indicate to you what deductions are to be made from such cases.

To begin with, our method of study is different from the old methods.

Up to the present, if one wished to study a substance one determined it chemically, one endeavoured to isolate it, to prepare it in a state of relative purity. But nowadays a new biological chemistry has sprung into being, that of imponderables. The *Chemistry of Imponderables!* These are two words which seem terribly contradictory. For chemistry depends above everything on the balance, and here we are constrained to study bodies beyond the reach of the balance.

The chemistry of the imponderables becomes necessarily therefore, the chemistry of functions, in quite a different sense from the chemistry of

functions in organic chemistry. It is the chemistry of the biological functions of the humours.

Assuredly there is a certain amount of danger in studying bodies that one cannot isolate, in giving them names, in describing their properties without having seen them, without having isolated them in the slightest degree, knowing on the contrary, that they are mixed together with a great number of similar bodies. This is a real danger which must be taken into account—all the more because we have seen Hippocrates, Galen, and the old masters of medicine describe humours which existed only in their imaginations! Nevertheless, here we are dealing not with hypotheses, but with positive experiments. Here, let us say, we have a cubic centimetre of serum containing, besides the normal substances of serum, an anticoagulating substance, an anaphylactizing substance, or toxogenin, a lipase, a glycase, an antihæmolytic substance, a diphtherial antitoxin, a tetanus antitoxin, and if the unfortunate animal from which the serum is to be taken is capable of resisting other injections of antigens, its serum may contain many other antibodies besides. It would be an utter impossibility to isolate these different substances, the properties of which are very similar, though certainly not identical. Let us content ourselves by studying the chemico-biological functions of this drop of blood, which is a world in itself, and which possesses very strongly-marked properties—properties that a sagacious and scientific experimentation is going to reveal to us.

We are as yet only at the beginning of this chemistry of imponderables founded upon the analysis of biological functions, and nevertheless we can already foresee several of its consequences. It leads us directly into a region which up to the present day was almost totally unexplored—that is to say, into the physiology of the individual.

Till to-day investigators have concerned themselves almost entirely with the physiology of the species. One endeavoured to learn the conditions of existence of rabbits, dogs, cats, and guinea-pigs, and it was believed that the different individual of the same species were identically the same, which is, in truth, very nearly the case. What is true of one rabbit would be applicable to another rabbit of the same size, sex, nourishment, and colour. But, as a matter of fact, such identity does not exist. In the vast forest there are no two families identically alike. No two animals are ever identical. It is certain that there are between them both anatomical and functional differences. Therefore it would be most interesting to physiologists to go further than they have yet done to determine these different characters; in a word, to work at the physiology of the individual after having studied the physiology of the species. To determine in what degree the individuals of the same species differ from each other would decidedly be a most useful and fertile discovery for physiology as well as for medicine.

Individuals of the same species differ in their psychological characteristics. This fact does not surprise us, since it has been a matter of common

knowledge for a long time. The differences are all the greater the higher we go in the scale of mental development. In the human race the psychological differentiations which give to each individual a special character are most strongly marked. Each of us has a personality which differs very sharply from every other human personality. Memory, which has fixed in each of us the recollection of dissimilar events, accentuates all the more this intellectual variety which exists in us from the hour of birth. We are not surprised at it for from the first beginnings of thought we have understood that our own "ego" differed from the "ego" of others in character, will, tastes, feelings, and memories.

We have, therefore, every one of us, a psychological individuality. But what has not been sufficiently taken into account is that each of us has also a humoral individuality. Each of us is differentiated from the rest of mankind not only by our mentality but by our chemical constitution. Since our humours contain an enormous number of impouderable substances, similar and allied, which most certainly exist in different proportions in different individuals, it follows that the humoral differences can be no less than the psychological differences. The more one analyses the chemical functions of the blood in different individuals, men or animals, the more one finds individual differences; and if, up to the present, homologous liquids belonging to animals of the same species have been identified, this is because it has only been possible to make an insufficient analysis.

Our chemical processes are too imperfect and too rough to reveal these differences to us. All the same we are able to affirm that they exist. The blood and humours of a person vaccinated ten years ago differ from the blood and humours of a non-vaccinated person. But will it ever be possible to isolate and determine this substance to which the vaccination has given birth in our organism?

Every illness, every intoxication, has caused the formation, perhaps the destruction, of a certain substance in the blood, and has left its natural trace, a trace which is not effaced by years. Just as there is the psychological memory, facts which are present to the consciousness, so there is a humoral memory of all preceding injections. As these injections differ in each person in intensity, quantity, and duration, it follows that each person differs from every other in the chemical properties of his blood.

It is useless to object that these differences are due, not to substances dissolved in the blood, but to leucocytes, and that it is by the modality of phagocytosis that individuals differ. According to the latest analysis, phagocytosis is a chemical phenomenon. The leucocytes have no activity save through the ferments they secrete, so that the differences of the phagocytes can be nothing else but a difference in chemical composition.

One might have hoped to discover a means of recognizing the individual humoral differences through the study of anaphylaxis. I have endeavoured to do so, but without success. This is how I proceeded. At first I tried to see how far it would be possible to transfuse the blood of one

animal into another of the same species and I found that one could inject into a dog 10 per cent, of the weight of pure dog's blood. A month later I injected the same dog with another 10 per cent. of blood taken from the animal from which the blood had before been transfused.

If there had been an individual anaphylaxis, there would have been at the second injection symptoms to which the first injection had not given rise; as if, for example, instead of two injections of dog's blood, I had given two of horse's blood. But the result of these experiments has been on the whole negative.

This by no means invalidates the fact of a strongly-marked humoral individuality, for anaphylaxis, notwithstanding all its precision, is still, like the rest, a somewhat rough process.

To sum up, as far as the law which is called the first law of humoralism is concerned, we can state positively that there exist in our humours innumerable substances, in infinitesimal and imponderable quantities, which, in spite of their minute proportion, play a considerable part in biological phenomena; and that, being in different proportions in each person, give to the humours of every individual a personal character, which differentiates him from all the other individuals of his own species.

We are, therefore, thoroughgoing humoralists; so much so that we can hardly suppose that the action of these infinitesimal quantities is exercised by the phenomena of ionization or osmosis. Whatever may be the importance of osmosis, it does not make itself felt when we have to do with the millionth part of a gram. It is certain that the mode in which these substances react is chemical, though we know little about the way in which chemical reactions operate in fairly strong dilutions.

Nevertheless we can foresee the modalities according to which these reactions of imponderable substances are effected. Certain remarkable and established facts relative to the function of certain glands, notably the pancreas, permit us to do so. The pancreatic trypsin has no digestive power; and as a matter of fact is it conceivable that there exists in a cell a substance which digests the cell itself? The pancreatic juice, isolated and gathered with minute precautions to guard against admixture with other liquids, is therefore deprived of all digestive activity, and the pancreatic cells contain no ferment. But they contain a "proferment," a pro-trypsin, which can become extremely active under the influence of diverse chemical actions, and notably that of intestinal enterokinase. The active chemical substance A is therefore preceded by an inactive substance A' which is its generator; and A' becomes A when it is in presence of another substance B' equally inactive. There will then be the following reaction, which is really very simple: $A' + B' = A + B$. It is probable that the quantities B' necessary to bring about the reaction are very small, and it is possible that B' does not disappear in this reaction. It is of little consequence; none the less, the matter stands as follows:

The activity of a liquid results from the conflict of any two substances which, isolated, are inactive.

This is the second law of humorism, to which I call your attention most particularly, for it is of very wide scope. The haemolytic phenomena are due to the action of two substances, the properties of which it has been possible to study separately. The phenomena of anaphylaxis are likewise due to the combined action of two substances which are powerless when apart—namely, the antigen, which is in itself in a small dose ineffective, and the toxogenin which exists in the blood of an anaphylactized animal, toxogenin the slow formation of which has been caused by the injection of antigen; toxogenin which is in itself absolutely ineffectual and non-toxic, since anaphylactized animals live for a long time in perfect health; toxogenin which becomes a terribly deadly poison in the course of a few seconds when it meets with antigen, which likewise, in itself, is inoffensive.

Moreover, we find a striking example of these combined actions in an experiment well known to all physiologists since Claude Bernard. Amygdalin, from bitter almonds, is an innocent enough substance, as is also the emulsion, which is not at all poisonous. Now, if an animal is injected with a very small quantity of emulsion, having previously received an injection of amygdalin, immediate and appalling symptoms appear, for the result of the chemical conflict of amygdalin and emulsion, both harmless, is a terrible poison (hydrocyanic acid). Every time that a careful experiment has been made on ferments and toxalbumins, so nearly allied to the ferments, it has been ascertained that in the organisms, ferments and toxins exist in the state of *proferments* and *protoxins*. The cell can only secrete a substance inoffensive for the cell; it would be absurd to suppose that it will produce that which is capable of killing or dissolving it. Therefore it secretes only a harmless substance, endowed with scarcely any toxic or fermentative properties. But this innocent substance, which is neither haemolytic, nor glycolytic, nor lipolytic, nor neurolytic, may become so when it encounters in its path another equally harmless substance. And the result of the reaction will be, according to the nature of the two bodies which come into play, or even of one of these bodies, the production of a substance either haemolytic, glycolytic, lipolytic, or neurolytic.

If most often we act upon ferments and toxins already formed, it is because we have not known how to prepare the protoxins and proferments. As a matter of fact, these preparatory bodies are probably of extreme instability, and transform themselves into real toxins and real ferments under very slight chemical influences, weaker than our laboratory reagents, which are violent and brutal, and whose action is not controlled. Thus, in order to arrive at a knowledge of these proferments we are nearly always obliged to study the organic liquids intact without having subjected them to any manipulations. The preparation and isolation of these bodies cause them to disappear, and the more one tries to purify them so much the faster do they disappear, as of old gold disappeared in the crucible of the alchemists.

We were speaking just now of the chemistry of the imponderables ;

now we have come to the chemistry of unstables. And certainly the difficulties are immense, but it is the interest of science that every step in advance leads us into a region the exploration of which is more laborious and more uncertain. Let us give this instability of chemical substances, humoral or biovular, its real name, its true physiological name—it is irritability. To be unstable is to be apt to modify one's self under the influence of the feeblest external actions; it is to be irritable by exterior actions, whether mechanical, physical, or chemical; all irritability—that is to say, the greater part of physiology—has for its basis the chemical instability of bodies which constitute the living being.

Thus, on the one hand, a substance is active, though the proportion of it is small; on the other hand, for the function of this substance, by the conflict of two substances which have been prepared long before, a very slight excitement, chemical or other, suffices. These two laws lead necessarily to a third, namely, that phenomena of great intensity may be produced suddenly, when a chemical cause, even a very slight one, intervenes. This chemical cause, which though infinitely minute leads to sudden and powerful effects, is produced by the nervous system. It is probably in this way that is to be explained that wonderful phenomenon which has justly attracted the attention of all physiologists—the action of the nervous system on the secretions. One of the masters of physiology, the great Pflüger, whose recent death we now deplore, a long time ago sought to discover nerve endings penetrating into secreting cells. This is not necessary in order to understand the phenomena of glandular excitement. We need not suppose that the nervous protoplasm comes into direct contact with the glandular protoplasm. It is sufficient to admit that a most minute fermentative reaction is produced from the beginning of the nervous tube to its ending, running along from point to point like a train of gunpowder, with a rapidity of 30 metres a second, and that at the extremity there appears a minute quantity of substance which is capable of acting chemically upon the secreting cells. The imponderability and the instability of the chemical substances of our organs are sufficient to explain this action. And perhaps it is by an analogous mechanism that the nerves act upon the muscles and determine reaction. Who knows even if the complicated actions of the soul, reflex or voluntary, the feelings and the emotions, are not also chemical phenomena, as Lavoisier has already remarked in words that have become famous. But I do not wish to allow myself to be carried away by hypotheses; it is enough for me to have established that the irritability of our tissues is the necessary and inevitable consequence of the two fundamental laws of humorism—imponderability and instability. You see, therefore, that there is no need to place in opposition to each other the humoral and the nervous theories, inasmuch as the irritability which rules the functions of the nervous system is in itself a humoral phenomenon. And, by a wonderful concatenation, the nervous system acts at every moment on the chemical constitution of our humours, just

as the chemical constitution of our humours reacts each instant on the nervous system. But in the case of the nerves, as in the case of the humours, it is chemistry that governs all. The living being is a chemical mechanism, and perhaps it is nothing more.

In any case its completion is astounding, and we might well be afraid, if we had not before us the example of our glorious predecessors. With resources very inferior to ours, with imperfect instruments, obsessed by ridiculous theories, they finished by bringing to light some truths from the ocean of darkness in which they were sunk. It is true that they were not always modest, and they often believed themselves to have grasped the truth when they had only got hold of illusion and error. There also let their example serve us as a lesson. Let us be bold in hypothesis. One is never sufficiently so. But let us also be very cautious in affirmation. For that which constitutes a true man of science is that he joins to extreme boldness in hypothesis extreme caution in conclusion. Especially, do not allow your patience to tire. Nature is rebellious, and does not allow the first comer all at once to tear from her her secrets. One only succeeds in learning these terrible secrets in fragments, and at the cost of long and laborious efforts. There is no need for me, gentlemen, to recall this to you who have disinterestedly given yourselves to the study of the great problems of life. It is not, therefore, to you that I speak, but I will speak all the same, for I should wish that my feeble voice could be heard louder and further.

Science to-day cannot progress without great pecuniary sacrifice. Science is costly. Instruments and laboratories, staffs and material—the expense increases every day with the increase of the difficulties of research. It is therefore necessary that public authorities and public opinion, which is superior to governments, should at last understand that physiology must be supplied with necessary arms. But, alas! it is other arms that are gathered on all sides. Never has the madness of militarism been so serious. All the energy that there is in peoples—energy in men and energy in money—is devoted to the fostering of absurd hatred and fratricidal rivalries. War—the war which ruins and desolates mankind—war takes all. All science—beneficent and fertile science—science has only the remains. Incredible and lamentable error, which at all times weighs on human destiny, and to-day more heavily than ever.

Do you wish for a striking example? Here it is. An admirable discovery has just been made. Man has just succeeded in constructing flying machines and in supporting himself in the air, in traversing space as rapidly and easily as a bird. We have some right here, gentlemen, to be proud, since it is the physiologists who opened the way for the brothers Wright. I can speak of it here before you, Mr. President, who have made such beautiful investigations on the flight of birds. And why should I not recall the memory of a great physiologist, my master Marey, who, with his profound sagacity, foresaw the triumph of the airman? And why should I not say—not, I admit, without some

pride—that with my ingenious friend/Zatin, in 1892, we constructed and floated the first aeroplane. Aviation, therefore, has its starting point in physiology, and it is well to record the fact here in a gathering of physiologists.

Well, poor man is brutalized by his warlike fury to such a point, that the conquest of the air by science and human industry has at once suggested to him the triumphant idea that the aeroplane is a marvellous engine of war. He has set before himself the glorious task of transforming an instrument of pacification into a murderous machine, and, excited by foolish journals, public opinion has become more violently warlike.

In the face of this immense human folly we, my dear colleagues, have a great duty. That is, to seek to dissipate ignorance, for it is by ignorance that men are made as bellicose as savages.

Let us combat ignorance and aid the coming of the kingdom of science, which knows no frontiers. Science makes existence happier and less cruel. It is entitled to the respect of all, for it prepares a less barbarous world for the men of the future.

Honour, therefore, to our science! Honour to physiology, which strives for the mitigation of the misery, the error, and the suffering of mankind!—The *British Medical Journal*, October 1, 1910.

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SEPIA VS. PULSATILLA.

BY MARTHA E. CLARK, M.D., OMAHA, NEBRASKA.

In Sepia we have a remedy exclusively the property of the Homœopathic School. We do not meet with any mention of it in the works on Materia Medica of the dominant school, save so far as they may make casual mention of the *bone* of the cuttle-fish—which seems to be their understanding of our preparation called Sepia. Dunham, in his lectures on Materia Medica, refers to the use of this drug as having been used on the treatment of diseases of women and in dysmenorrhœa as far back as the time of Hippocrates—and that Galen ascribed to it tonic properties which are still recognized—while others recommended it for “gravel” and as a remedy for the “removal of freckles.” Provings of the dried preparations of Sepia from the days of Hahnemann down to the present time confirm the doctrines of the ancients that the special action of this drug is on the sexual organs of women—although it pervades all other organs and has marked action on the liver and digestive tract. Hughes says it has its sphere of action in the portal system, causing obstruction and venous congestion.

Sepia has many symptoms in common with Pulsatilla, and at times the line between them is closely drawn, especially in the treatment of diseases peculiar to females, and they should in no case be alternated, as, like most drugs, having many symp-

toms common to each, they are mutually antidotal. A most valuable arraignment of the regions upon which *Sepia* has its action in relation to the portal circulation will be found in the American Institute reports for 1875-6, pp. 204 to 246, which is well worth our attention. In the study of *Sepia* and *Pulsatilla* we may perhaps be allowed to regard them as members of the same family, so far as their symptoms may express such relationship, regarding *Pulsatilla* as the younger more impressionable, and of a mild, gentle, yielding disposition, easily moved to tears through sympathy, while *Sepia*, the elder sister, having been called upon to endure more of the trials of domestic life than have fallen to the younger, has become irritable, fretful, easily offended, or under circumstances favoring such conditions exhibits great apathy, indifference to even her own family, and instead of finding relief in tears, as does her sister, *Pulsatilla*, is more apt to be obstinate, even defiant. *Sepia* is apt to have headaches from comparatively little excitement, and these make her irritable. Every time she goes down street to do a little shopping she may have a "nervous headache." (This is also like *Epiphegus*.) She also has headache with aversion to all kinds of food, with that peculiar "goneness" in pit of stomach, which sensation, by the way, is apt to appear in the forenoon; a "ten to eleven o'clock" symptom. Sulph. also has this "all gone sensation," but is not associated with the same line of symptoms that are found in *Sepia*.

Sepia usually carries marks of identification on her face, in the way of "yellow spots—moth patches," complexion sallow, hepatic spots on lips and chin,—scurfs and black pores on face—and in chronic uterine complications the "yellow saddle across the nose" is frequently met with. All these are unlike her sister, *Pulsatilla*. Her skin is fresh and either rosy or anæmic—complexion fair, eyes blue, sandy or auburn hair, and if there be acne is usually on otherwise healthy and rapidly-growing girls. Her headaches are usually of gastric origin, as after eating too much—particularly of fat meats or rich foods, or from suppressed menses—or those suffering from

amenorrhœa, or excessive study of school girls when not due to eye-strain. All the headaches of Pulsatilla are somewhat better in the open air—when walking slowly about—while those of her elder sister, Sepia, are worse by motion and stooping—better by lying down in a darkened room and keeping eyes closed.

Sepia is especially unhappy during the months of gestation. She is apt to have a great aversion to bread, meat and many other articles which she formerly relished. She may acquire a taste for acids, such as sour wine, vinegar, etc., and the sight, thought or smell of food cooking causes nausea. Here she and her younger sister run on parallel lines—for Pulsatilla presents precisely the same series of symptoms—but there are the general characteristics of the two, as to disposition, temperament and other symptoms and conditions, which makes the choice comparatively easy. Among the differential symptoms we find Sepia suffers from that "all gone" sensation in pit of stomach—which does not trouble her sister. She has a relative, however, "Murex," who has this "all gone" sensation—but this symptom with her appears in connection with "a consciousness of a womb," which Sepia does not complain of.

Sepia also sometimes has leucorrhœa; it is generally greenish and thick—or may be profuse, watery and offensive, as when coming from the cavity of the uterus. She also has prolapsus uteri (especially in recent cases) or retroversion. The leucorrhœa of Pulsatilla is milky, thick—sometimes acid, causing swelling of vulva, but may also be milky and bland.

The menstrual function of Sepia is quite clearly defined, and, when keeping the general temperament of the patient in mind, can easily be differentiated from parallel symptoms of other drugs. For instance the menstruation of Sepia is most profuse at night—while at rest—and accompanied by bearing down pains in uterine region. Pulsatilla flows most during day, and may cease entirely at night; her menses are oftentimes preceded or accompanied by cold, chilly sensations in abdomen, with loose stools—all conditions aggravated by warmth or in a close

room—better in open air. Cyclamen runs parallel with Puls. in having scanty, painful or suppressed menses, with headache, vertigo, pale face, etc., as Pulsatilla, but has dread of fresh air. Both have the melancholy disposition, with tendency to lachrymation when sympathy is offered—but Cyclamen desires solitude and the *inside* of the house—while Puls. seeks company and prefers the open air. c

Regarding the emotional sphere of Pulsatilla, we are not to understand that the lachrymose tendency is always to be associated with her, as she has relatives galore who can laugh one minute and cry the next, as we find in studying the temperament of other female members of her family. Pulsatilla is a perfect picture of a late spring or early summer day, when beneath the blue arch of the heavens we see the light, fleecy clouds slowly moving along—for a few mementos concealing the sun and sprinkling the earth with a flood of rain drops—rapidly passing along, allowing the bright sunshine to dry up the tears by its gentle rays, and smiling upon all nature once more, as if no shadow had ever crossed her face—so Pulsatilla—gentle, mild, emotional Pulsatilla, is emphatically a child of sunshine and showers, with a disposition and temperament unlike any other member of her family. By this I do not understand that a disturbance of the emotional sphere is always to be regarded as the keynote, for this symptom may be, and indeed often is, present under circumstances and conditions when Pulsatilla is not to be thought of. Let us bear in mind that a lively disposition and a considerable degree of spirits, with or without tears, may be a strong indication for Pulsatilla, while a sad, drooping, desponding condition may, and quite likely will contraindicate it. In a general way, laughter and tears, coming with an equal degree of readiness, are a strong indication for the use of Pulsatilla. Now *Sepia*, as we have already found, may present many of the pathological conditions relating to the female economy, as does Pulsatilla, but from her temperament and disposition she is not likely to present the same train of symptoms as does her younger sister.

She laughs and cries almost at the same time, but more from hysteria than emotion. She is impatient, morose, irritable, and in acute conditions somewhat vehement in her expressions; she wants relief and wants it quick, or will know the reason why. There are no summer showers here, but in her mental horizon may be discerned a cloud of peculiar coloring, at first harmless enough in appearance, but soon assuming such threatening aspects as are familiar to the residents of some sections of Dakota, for example, and right here her medical attendant had better furnish the required relief or retire to his cyclone cellar.

Of the menses of *Sepia* little need be said here, as we are all presumed to be familiar with them, but a short review may perhaps be in order. We find that they are somewhat irregular as to time, flow most at night, during sleep, may be profuse or scanty, and in women having uterine complications are accompanied by a "bearing down" sensation, with a feeling as if something would be forced out of the vulva. This distress usually appears early, and is relieved when flow becomes abundant. Now *Pulsatilla* has something of the same conditions when suffering from menstrual colic, causing her to cry out and toss about the bed in every direction—flow comes by "fits and starts." Menses easily suppressed by getting her feet wet, and, after having been delayed, comes on in intermittent spells and is profuse, of a dark, blackish color. Hering's Guiding Symptoms record a great variety of menstrual symptoms under *Pulsatilla*, and usually includes these conditions: "Flow changeable, mostly in day-time while walking—relief in open air—easily moved to tears," while under *Sepia* there runs a strata of symptoms so closely allied to her temperament that, having comprehended the one, makes it quite easy to differentiate between the two.

The action of *Sepia* seems to pervade almost all organs of the body—not producing any changes in structure, but altering secretions, causing them to become sour and acid. Cowperthwaite places it at the head of the list of remedies for the

treatment of uterine displacements especially prolapsus, while Pulsatilla acts especially upon the mucous membrane the veins, causing varicose conditions, and on the venous system generally, causing an obstructed circulation of the portal system by means of which venous stasis results rather than arterial congestion. These two remedies, Sepia and Pulsatilla, seem to be the most efficacious in their action on the female reproductive organs of any which we have daily need. Here it will be seen that both Sepia and Puls. cause venous congestions, and were it not for the characteristics of each—or regarding them as *individuals* and treating their characteristics as *temperaments*, it would seem that they were almost identical in such conditions. We must bear in mind that the venous congestion of Sepia is primarily in the portal circulation, producing the well known hepatic symptoms peculiar to her temperament, the general condition being that of torpidity and depression, while the action of Pulsatilla on the venous circulation causes varicose veins in various parts of the body externally—in the vaginal mucous membrane—and a varicose condition in the male appendages. Both have painful protruding hæmorrhoids—both have suppression of menstrual flow—but the magnifying glass must be applied to the peculiar individual features of each that the one may be separated from the other, as no one single individual symptom can exist without some characteristic indications accompanying it. It is only by closely individualizing *any* drug that we are able to bring out its characteristic features.

Thus far it will be noticed that we have considered *Sepia* in its relation to the disorders peculiar to females. The limitations of a paper for this Society would prevent a very extended consideration of any drug, however necessary in our daily practice, but we must not confine our interest in any drug to its more prominent field of action. Do not let us overlook the fact that *Sepia* may be quite as often indicated in diseases which affect both sexes. We are apt to allow ourselves to “run in grooves,” and the longer we do so the deeper the grooves

become. If we consider only the sphere of action of *Sepia* in its relation to the diseases peculiar to women we lose a great deal of the drug which is valuable in other conditions, and for which it may be difficult to find a substitute. By its action on the portal system alone—where there is no organic change whatever—but where the functions of the liver are deranged—we find a train of symptoms which would seem to be covered in part by several remedies, if we depend wholly upon objective conditions. Now let us refer to the condensed deductions expressed by Dunham, and see wherein lies the value of *Sepia* in ailments not wholly confined to females: In speaking of “functional derangements of the liver,” an abbreviated report or “synopsis” of his remarks would read something as follows: “The functions of the healthy liver are not simply or chiefly the secretion of bile, but the formation of glycogen, which contributes to the maintenance of animal heat and to the nutrition of the blood and tissues and the development of white blood corpuscles; also, the destructive metamorphosis of albuminoid matter, the formation of urea and other products, which are eliminated by the kidneys, and the secretion of bile, the greater part of which is re-absorbed, assisting in the assimilation of fat and peptones and in those chemical changes which take place in the liver and portal circulation, part being excrementitious, passing through the bowels, stimulating and arresting decomposition. Now a functional derangement may be a modification or arrest of any one of these healthy functions.”

If the power of converting glucose into glycogen be impaired by functional derangement, glucose passes into the general circulation, and as a result we have sugar in the urine. Now if this is produced simply by a “functional derangement,” we have a form of diabetes easily curable; but should we have the more severe form, hyperæmia of the liver, depending on paralysis of the base motor nerves, we find a more serious condition.

In short, all or any of these functions of the liver may be present and are recognized by objective symptoms generally,

and it is these "functional derangements" which give rise to an array of symptoms, either separately or collectively, for which we may be led to *Sepia* as the remedy.

My object in presenting these drugs as individuals is, that we may have a mental photograph of each in our mind, by which we may at a glance recognize either—as we would in meeting a friend on the street—or in a crowd. We do not begin our recognition by analyzing features, form, stature, etc., but at a glance we comprehend the individuality of the person, and, if sufficiently familiar with their appearance, the identity is instantaneous. Just so with our study of *Materia Medica*. We should learn to individualize each drug until the characteristic features are so familiar to our senses that we may recognize them at a glance. True we cannot prescribe for peculiar ailments in individuals by finding their reflection in our mental mirror of such a drug as presents their strongest resemblance, for we must know, first, whether their ailment as related by the patient covers the pathogenesis of the drug we may have in mind, or whether, as in the case of *Pulsatilla* and *Cyclamen*, the full pathogeneses of the drug cover the symptoms as related. We have already found that *Cyclamen* may have the menstrual condition parallel with *Pulsatilla*. Both have the melancholy disposition with tendency to tears, but *Cyclamen* finds no relief in tears, while *Pulsatilla* does. *Cyclamen* also has some headaches, whether arising from gastric origin, or otherwise, but is worse by motion, better by seclusion in a quiet room. When *Pulsatilla* has headache from any cause she wants to be out of doors, and finds relief by slowly walking about. Our critics are inclined to question these characteristics of different drugs, and as I have heard the inquiry, *why* should these peculiarities exist? Well, can anyone tell why one person suffering from an ailment should be relieved at precisely the same hour that another finds his condition aggravated? Can anyone tell why one person invariably has his chill recurring at ten o'clock in the morning while his neighbour has at eleven or any other hour? Individuality runs

through every shrub, plant, flower, or organized life of whatever grade, just as surely as it does through the human family. Some one has said that every child born into the world has its counterpart in the characteristic features of some plant or substance of inorganic life, and it is this fact, for fact it is, that is the foundation of our science of applied therapeutics. By studying drugs as individuals, and analyzing each prominent symptom which they present, we can more readily comprehend their general action and establish them in our minds, as we do the personality of an individual, than by any other means with which I am familiar. Let us take, for illustration, the general characteristics of Pulsatilla, or at least enough of them to make the identity of the drug clear. Let us fix these features in our minds, and we have the general appearance and characteristic conditions and symptoms of the Pulsatilla patient. Now the line of symptoms presented by the patient may be so nearly identical with the recorded symptoms of the drug that we are not sure whether we can call it by the name of Pulsatilla, or whether we can, by pursuing the resemblance a little further, determine that it *looks* like Pulsatilla, but its name may be *Cyclamen*! or *Murex*! The temperament would have to be considered before a name could be given, even after the skin, hair, eyes and general features may have seemed to settle the identity. So it is with *Sepia*; we would not expect that a *Sepia* patient would recite to us the same morbid phenomena as we hear from Pulsatilla; for if we are familiar with *both*, and we have the patient before us, the identity is established even before she speaks a word. *Sepia* and Pulsatilla may *seem* to be as nearly alike as twins, but who ever saw twins who did not bear some points of dissemblance?—The *Journal of the American Institute of Homœopathy*, December, 1910.

THE GREAT EARTHQUAKE AND FIRE IN SAN
FRANCISCO, CAL., APRIL 18, 1906; THEIR
EFFECTS UPON THE NERVOUS
SYSTEMS OF THE SUFFERERS.

BY H. R. ARNDT, M. D., SAN FRANCISCO, CAL.

When in an evil moment I imposed upon myself the task of discussing before you the effects of the great earthquake on this coast and the local events immediately succeeding, in reference to their permanent effects upon the nervous system of those who passed through them, I hardly realized what an unsatisfactory work I had undertaken. The chief difficulty I encountered arose from the fact that I could not secure reliable data for the purpose of comparison.

California as a State has for many years been considered a country especially afflicted with an exceptionally large number of cases of insanity; in other words, it has been held that a natural predisposition to insanity belongs to California. Without considering the correctness or incorrectness of this impression, I will state that years ago I made a careful study of this question, and at that time was forced to admit that in comparison with other States our percentage of the insane was large, but that this was, and I still believe is, due to the steady influx of invalids into California, who by constitutional exhausting diseases are ready "to go to pieces" on slight provocation and, when predisposed to insanity, as is not infrequently the case, readily find their way to the insane asylum. These non-Californians greatly increase the number of persons who find admission to our State institutions, and materially affect to the disadvantage of our State the result of statistical evidence upon this question. Cases of tubercular insanity, for instance, are here comparatively frequent, and in my own experience have been noted almost exclusively among persons who came to this coast for such relief from tubercular affections as they had reason to expect from an outdoor life.

Nevertheless I believe that California has her full share of the psychoses, and probably more than her full share, because

in California life, especially in the old California life, are found conditions sufficiently strenuous to tax to the utmost the vital forces of any one subjected to them. The intense excitement of the earlier days, with its coincidental hardships, gambling and absolute recklessness, could not have been endured at all save by men and women of almost phenomenal toughness of fibre. As it is, the most eccentric tendencies of character were developed among the pioneers affecting all their relations in life. These eccentricities showed themselves in the stupendous business ventures peculiar to their day (as the transcontinental railroad); the readiness to take desperate chances of both life and fortune; and in common life in those oddities of habit and the formation of those odd characters found nowhere else in Western life, which are so fascinating to us of the later generations when translated by the medium of some gifted story teller. Few camps in those days but that some one might "run amuck" at most any time; indeed, so common was this occurrence that, even when involving loss of life, it rarely attracted the attention of any not immediately involved. The children of the pioneers were a fine race physically, but they possess, especially in the older generation, the same venturesome spirit and much of the neurotic disposition of their progenitors. Progressive generations, however, experienced the legitimate results of the reckless dissipation of vital energy in their ancestors; they give abundant evidence of the neuropathic strain which is intensified or modified for the better according to environments surrounding each case. The northern part of this State, i. e., that part of it which lies north of the Tehachapi Pass, shows this more plainly than do the counties south. In the latter insanity more often develops in those psychoses which so largely depend upon that extreme loneliness found in the pursuit of utterly isolated employment, as work on some distant chicken ranch, and particularly in sheep-herders. Here steady drinking of the cheapest and poorest whisky, wholly without the redeeming feature of conviviality, and various forms of sexual abnormalities, resulting from the entire absence usually of association with women, give

us among the lower classes, as among the Mexicans, a great deal of insanity.

San Francisco, the metropolis of the Pacific Coast, and in the early days the Mecca of all miners, gold hunters, gamblers and speculators from every part of the coast and of the world, was the point at which this high-tensioned life found its readiest expression. Life ran riot here, and never has assumed, nor is it likely ever to assume, the quiet reserve which it does in the East; when it does, the genuine dear old San Francisco will have ceased to exist. We have at normal times no more crime, no more depravity than are found in the large cities of the East; yet there is active with us that aggressive and self-asserting spirit of non-restraint which scorns to hide phases of life that usually are religiously excluded from view, and in its more innocent expressions creates an atmosphere of personal freedom which grows dear to all who have ever lived in it. But in San Francisco, too, life is strenuous, for it is an expensive city to live in, a pleasure-loving city, and one whose life-giving and baring atmosphere stimulates to the full the joy of living. This type of existence, unless backed by much good sense, habits of regularity and a vigorous constitution, tends to bring to the foreground neurotic tendencies; hence a catastrophe like that of April, 1906, would not be expected to pass without producing serious and well-marked results upon the nervous system and especially upon the minds of all who were sufferers from it.

The elements of shock were, of course, most marked at the time we passed through the first ordeal, but not shock as we commonly define it. We were rudely awakened from sleep in the early morning hour and instantly recognized the complete helplessness of our condition. I was absolutely helpless, and in spite of my desperate efforts to get out of bed was unable to do so. I was tossed about like a rubber ball. The crash of falling pictures, bric-a-brac and of furniture was unceasing, and the grinding and creaking of the timbers of the house in which we lived was simply appalling; my room was darkness itself from the soot which the tortured chimney sent down in clouds. With

it all, I surely was not frightened, and yet I have few of the elements of the physical hero in me. I simply felt that for me and for several thousands of others the end of all things had come, experienced not a trace of fear at the time and realized the perfect uselessness of seeking escape. Only once, when the frightful movements of the earth, after an instant's weakening, redoubled in greater violence than ever, was I conscious of fear that lasted for but an instant. When the frightful forty-eight seconds had passed,—and they seemed to cover a life-time—I assured myself of the safety of my wife in the adjoining room, and then we proceeded to dress without either desire or ability to exercise great haste. Having dressed, I realized that we must look after a friend who a few days before had undergone a capital operation, and I urged my wife to get some coffee while I took the car to the hospital. It was only after I got into the street and saw in every direction fronts and walls of large buildings lying in the street that I realized that no cars were running and that a besom of destruction had swept over the city. But I never in my life was more quiet and self-possessed; no fear, no excitement, no particular emotion, no consciousness even of being "dazed." On the street I found many persons I well knew, among them Dr. James Ward, all partly dressed, looking serious, pale, but perfectly calm, I then for two hours was employed in finding my ill friend, at the hospital, and had occasion to see more fully the destruction of property and to learn of the loss of life. The fact that many parts of the city were on fire, that there were no means of fighting the fire, that our famous Fire Chief Sullivan had been killed by a falling chimney, that the city was severed from all communication with the outside world, that all sorts of frightful capers had been cut up by the seismic disturbance,—all these facts I gradually took in, but with absolutely no concern for myself or others. It seemed as though I were far removed from all desire to live, from all interest in earthly things,—as though life itself were an empty term that defined no condition known or of personal interest to me. When a second and severe shock occurred soon after seven.

o'clock I felt a great pity for the frightened and hysterical women and children but no concern for myself. I saw the troops start from the foot of Van Ness Avenue, and it required some effort on my part to understand the purpose of their movement down town. The fire was then spreading rapidly, and I was assured that the building in which my offices were had been partly destroyed by the earthquake and was then being "gutted" by the fire. I did not worry. The most appalling sights appeared like "matters of course;" when even in the days and nights following we were lying in the open air, the sea ahead of us, and the sea on each side of us, and an ocean of fire back of us, with hardly a drop of water to drink, no food assured for the next meal, with absolutely nothing to hope for in the way of relief, I was more unconcerned than I perhaps have ever been in my life. I speak of my own experience because that was nearest to me; but it was the counterpart of the experience of nearly everybody else save as in some an hysterical state appeared to prevail. As a matter of course, the necessity arose at once to look after persons who had been badly hurt and to find safe refuge, of at least a temporary nature, for those who were old or otherwise helpless; everybody volunteered, for a desire to do for others reigned supreme from the start. It seemed as though a Pentecostal fire had swept the community.

These were the immediate effects of the earthquake. In the main it seemed as though a state of cerebral hyperæmia were all-pervading and that it accounts for the mental condition of the people during that tragic week.

Four years have now passed, and one of the most interesting questions of to-day is this: To what extent, if at all, did this frightful catastrophe aid in unsettling the minds of those who passed through it?

In view of the fact that the official records, which alone can determine whether or not the number of commitments to asylums have been greater since the fire than they were prior to it, were either destroyed or found in such mutilated condition that they are of no value, personal knowledge and the tables of State

asylums are our only avenues of information. It is beyond doubt true that quite a number of cases of insanity occurred soon after the earthquake and fire, but it seems as if in every such case the *predisposition* was well marked, and that the catastrophe only acted as the exciting cause. I have repeatedly discussed this question with members of the Commission in Lunacy, through whose office all commitments to the asylum are made, and am assured by them that cases are very rare in which insanity may be traced to the earthquake and the emotional excitement connected with it; in fact, they practically deny it. I have the history of only two cases who at the time seemed, lost their reason from the effects of the excitement of the earthquake. In one of them, however, a man of middle age, I have since his commitment found that in his youth serious suspicion of his sanity had been entertained, and that he barely escaped even then being sent to an asylum. In the other case, that of a woman of about 45, approaching the climacteric, have since her admission to a State institution found proof of a neuropathic tendency inherited from her father, and of some symptoms of mental disturbance before the fire; she passed through the ordeal in excellent shape displaying sound judgment and ability to take care of herself and family; no emotional disturbances were observed for many months: but delusions of a tormenting kind finally appeared, and in spite of marked temporary improvement under the indicated remedy these delusions at last occurred in an aggravated form and demanded commitment.

Dr. John W. Robertson, of the Livermore Sanitarium, who is a man of much experience as an alienist, also decidedly denies that there was an increase of insanity, and declares that emotional excitement in a normal, stable brain is neither a predisposing nor an exciting cause, but must be considered in the light of a first symptom of the disorder.

An examination of the records of the asylum in this State shows that the number of patients admitted for a year after the earthquake was somewhat greater than during the preceding year. This increase amounted to 68 at Napa; 42 at Mendocino;

10 at Stockton. Of the numbers admitted at Patten during the same period of time I am ignorant, but it must be remembered that the State asylum at Agnews was in part destroyed, and that the number of patients removed from there to other institutions more than accounts for the increase in the numbers reported by them. If we add the fact that the report of the State Superintendent of Hospitals shows that in all the institutions, both State and private, there was actually a decrease of admissions of 127 patients in 1907, as compared with 1906, we are forced to admit that in the San Francisco disaster at least insanity did not follow in the wake of the great calamity.

It is, however, more than probable that neurasthenic states have been more numerous than before the fire. In view of the fact that the majority of these cases receive treatment at home, commonly at the hands of their family physician, and that statistics here are not obtainable, we are met with an insurmountable difficulty in the formulating of reliable data; this is vastly increased by the fact that at San Francisco the Christian Scientists and the Emmanuel movement people have during the last few years been in the field aggressively and successfully, and that reliable information cannot be had from these sources. Responsible physicians, however,—and I have carefully discussed this matter with many—agree that neurasthenia and other asthenic states have occurred in abundance. I had a greater number of them under my observation in 1907 than since, but attribute this lessening to the increased stringency of the times which, since 1907, has prevented patients from consulting a physician unless unavoidable, and the falling of many people since then into the hands of faddists, under the impression that thus they were lessening expense.

This increase of neurasthenic states is beyond doubt partly due to the shock of the catastrophe itself, but chiefly to its results, entailing unaccustomed physical and mental exertion, loss of property and friends, the severing of old and dear ties, and the great number of other untoward conditions under which we have since then struggled, as economic upheavals,

strikes, corrupt administration of municipal affairs, stress of all business affairs, general sense of insecurity, dread of failure and disgrace, and a thousand minor considerations which would have affected even more seriously a community less resilient, less hopeful, less willing to be amused than San Francisco. Cases were reported of marvellous, sudden recoveries from paralysis and general, confirmed invalidism. Investigation proves that in many instances startling and sudden relief was had from long-standing complaints; in fact, it was a matter of common observation during the first few months of our rehabilitation that all felt in every way stronger than they had for years; ate heartier and slept better; worked harder and felt no fatigue from it. It seems proved that some hysterical forms of weakness of limbs in the excitement of the hour promptly disappeared, but I can find no authenticated case in which anything like a cure was observed when a lesion actually existed.

An increase in suicide, it is generally admitted, always follows in the wake of events such as I am discussing, frequently associated with alcoholism. This was surely true in our city. Alcoholics, to start with, lack in powers of resistance, and are driven to despair when others would not yield. At San Francisco a rather prolonged period of enforced total abstinence, broken only at great risk of personal safety, even life, was followed by unrestricted indulgence after the bars had been let down, and I know of several cases of suicide directly due to prolonged debauch at this time. But the anxieties which followed were enough to try brave hearts, and men and women who lacked physical and moral backbone in many instances deliberately ended a life which had in it nothing satisfying and seemingly no assurance of better times coming.

The aged at the time of the disaster felt the special demands made upon them and in many cases forgot their infirmity. Unconscious of special effort, they once more in many instances took hold of the duties of life. In some cases they rendered most valuable service. It is reasonable to assume

that in some persons collapse occurred after the most imperative demands had been met. This collapse became complete and fatal, or a state of profound senility developed, associated with the symptoms characteristic of this condition. But, taken as a whole, the people, young and old, suffered less permanent harm than could have been anticipated and are now bravely bearing burdens that would try the stoutest. Throughout all they have been sustained by the remembrance of that loving kindness which in the hour of extreme suffering extended to them proof of such brotherly affection as the world had not often seen.—*The Journal of the American Institute of Homœopathy*, January, 1911.

EDITOR'S NOTES.

Treatment of Epilepsy.

"Unfortunately the medicinal treatment has proven most unsatisfactory. A very large number of drugs has been used in attempts to alleviate or cure the disease. All of these have had their special advocates, and all are more or less unsatisfactory.

"In our experience the judicious administration of the bromides has proved more beneficial than any other drugs.

"It is certain at the present time we know of no curative medicinal remedy.

"As to the general treatment, it is now universally recognized that epileptics, as well as the epileptic insane, are best treated and cared for in institutions where the following methods are in vogue : 1st. A simple mode of life, with the strict avoidance of excitement and abstinence from alcoholic liquors. 2nd. Regular and congenial employment best suited to the individual mental and physical condition of the patient. 3rd. A certain amount of both work and play, with the simpler forms of outdoor exercise. 4th. The reduction of the usual sedative medicinal remedies to a minimum amount."—*The Journal of the American Institute of Homœopathy*, January, 1911.

Count Tolstoy : A Personal Reminiscence.

I had met my great compatriot only once, but to the end of my life I shall remember the profound impression of this meeting. It happened in a train going from Kieff to Odessa. Tolstoy always travelled third class. To be, at least for some short while, in his closer company I changed my ticket and accommodated myself opposite the count in a filthy railway carriage packed with peasants. Tolstoy delighted to mix with these, to converse with them on their needs and misery, and he always did it with that straightforwardness and naturalness which were such pronounced characteristics of the great man. On one station we saw a group of prisoners being despatched to Siberia. Tolstoy left the carriage and entered into conversation with them. Afterward he made to me the following characteristic remark: "Government and society engender these outcasts and then send them to Siberia, or still worse, execute them." When I ventured to ask what then should be done with such outcasts, Tolstoy answered :

"What do you do with sick and diseased and insane persons? And do you really think that these prisoners are worse than those who condemned them?" Tolstoy had some perplexing incongruities of mind. Thus he disliked medical men and he felt an uncontrollable antagonism to Jews. When the latter were persecuted he never raised his mighty voice of protest. Great as he was he could not rise, in this respect, above the general feeling of the fierce Russian antisemitism. As to medical men, he often ridiculed them and their science and never showed any confidence in their treatment. Yet with all that he was undeniably the greatest Russian of his time.—*The Lancet*, January 7, 1911.

Plague in Manchuria.

A virulent epidemic has broken out at Tsitsihar and the neighbourhood of Harbin on the Russo-Manchurian frontier. The daily returns of deaths have been from 500 to 600, and the majority of cases are reported as being pneumonic plague. This outbreak is an instance of the persistence of *B. pestis* under extremes of temperature. It is probably no exaggeration to say that North-Western Manchuria is one of the coldest parts of the world. 49° below zero (81° of frost F.) have been recorded in winter, and, at the present time of the year, when a north wind blows, life is almost unbearable in the open for more than short periods of time. It is too cold for snow unless heavy falls occur at the very beginning of winter. There is perpetual sunshine and the cold is very dry. Under such climatic conditions the inhabitants and animals keep indoors as much as possible and infection is easily spread, especially when the plague is of the pneumonic variety. The Russian authorities, at the request of the Siberian Railway Administration, have been active in sending troops and doctors, and have established a picket line of Cossacks on the Manchurian frontier to guard against the further ingress of Chinese coolies, who, in order to evade the rigorous medical inspection at Pogranichnaya railway station, leave the train on the Chinese side of the frontier and cross the boundary on foot. A cordon has also been drawn round the plague-infected area and only Europeans and a few known Chinese are allowed to cross. These vigorous measures have aroused some resentment among the Chinese, who in some instances, no doubt due to difference of language, customs, and habits, were roughly handled. The Chinese prefect at Harbin received official

orders from Peking to organise plague preventive measures and to establish isolation hospitals and medical inspection bureaux. To help him in this work the Government has sent Dr. Mesny, a French medical man with previous plague experience, and Mr. Gnoh Lean Tuck, M.D. Camb. Dr. Tuck had a fine medical career in England, where he held research scholarships in pathology and bacteriology, afterwards studying at the Hygienic Institute, Halle, and the Pasteur Institute, Paris. These two medical men have been given a free hand by the Imperial Government and are to co-operate with the Russian authorities to bring every preventive measure possible into effect. This is noteworthy as being the first occasion in which the Government has shown itself alive to the dangers of allowing the unchecked spread of an epidemic outbreak. The Russian Government has put its plague measures in the hands of Dr. Zabolotnui, a noted bacteriologist who made a reputation for himself in plague investigation in Odessa some time ago. He has been given a staff of 15 doctors to assist him. The latest news to hand is that the epidemic is showing a diminution in Manchuria, where the mortality is less than during the previous week, but there are still a good many cases and deaths in Harbin, sufficient to cause anxiety. I am unable to give official rates, as no figures have as yet been published, though it is said the deaths have hitherto numbered some hundreds per week.—*The Lancet*, January 21, 1911.

The Ipecacuanha Treatment of Amœbic Dysentery and Acute Hepatitis.

Some drugs, like some fashions in dress, have their day and are soon forgotten. Occasionally, however, a particular remedy is revived and comes again into favour. A recent instance of this is the employment of ipecacuanha in the treatment of amœbic dysentery and its formidable sequela acute hepatitis. For a long time this drug enjoyed a high reputation, being regarded almost as a specific by some authorities like MacLen. Gradually, however, the drug lost its reputation and sank into disuse, except perhaps, with some practitioners in India who had proved its utility by long experience. The reasons for this waning of popularity of ipecacuanha with the profession are not easy to find. Perhaps some gave it up because there was no scientific explanation of its apparently specific action. Others may have had lack of success through administering it in insufficient doses or without observing the

due precautions which are necessary. Some may have abandoned it finding that the drug lost its special properties when kept for any length of time in a hot climate, or it may have been employed in some of the bacillary forms of dysentery, in which its action appears not to be so potent. It is largely through the efforts of Major Leonard Rogers, professor of pathology in the Medical College, Calcutta, that ipecacuanha has recently been restored to favour. In his well-known work on fevers in the tropics he pointed out that the ipecacuanha treatment of amœbic hepatitis prevented the occurrence of suppurative hepatitis, or tropical liver abscess; that this complication could be entirely avoided if the treatment by ipecacuanha were employed. This, he suggested, might well be included in the list of maladies which recent research work has largely conquered. Deaths from hepatic abscess in the British army in India have, it appears, within the last three years been reduced by nearly two thirds, and they are still decreasing. Further valuable evidence in support of Major Rogers' contentions has been recently forthcoming in the form of a series of papers read before the Medical Section of the Asiatic Society of Bengal by Colonel H. W. Pilgrim, I.M.S., surgeon-superintendent, Presidency General Hospital, Calcutta; Lieutenant-Colonel F. J. Drury, I.M.S., Principal, Medical College, Calcutta; Lieutenant-Colonel J. T. Calvert, I.M.S., professor of materia medica, Medical College, Calcutta; Lieutenant-Colonel A. H. Nott, I.M.S., civil surgeon, Howrah; and Captain Greig, I.M.S. These papers were published in September last in the pages of our contemporary, the *Indian Medical Gazette*, and have now been issued in pamphlet form, containing also a brief summary of the discussion which followed the reading of the papers. The evidence of Colonel Pilgrim is specially convincing. He asserts that during the last three years all his cases of dysentery treated by ipecacuanha have done well, as also his cases of hepatitis. In not a single case of dysentery so treated has hepatitis occurred as a complication, and every patient coming under his care with hepatitis already established has, under ipecacuanha treatment, recovered without passing through any stage of suppuration. In these days when faith in drugs has grown weak the evidence brought forward by Major Rogers and supported by Colonel Pilgrim and his colleagues deserves the most serious attention of all who are called upon to treat amœbic dysentery and its sequelæ.

—The *Lancet*, January, 14, 1911.

Fruit Diet.

An interesting lecture was given by Dudley Wright, Esq., F. R. C. S., on Monday, November 14th, to an appreciative audience, numbering about sixty.

The subject was "The Dietetic and Medicinal Value of Fruits."

By way of introduction, Mr. Wright pointed out that the word "Fruit" had a much wider meaning than was often supposed; as that part of any plant which produced seed was, properly speaking, fruit; and that therefore in talking of fruit as a diet, nuts and grains must be included.

Mr. Wright first dealt with the objections raised against fruit as a diet, amongst them, the following:

That fruit caused the blood to become too acid, that it often caused dyspepsia and skin diseases.

Mr. Wright explained that the acids in fruit being vegetable and not mineral, tended to render the blood more alkaline, and only produced acidity when the fruit was taken in wrong combination or in such a way as to cause fermentation, when it would also cause dyspepsia; whilst if taken in the right way, many fruits were most beneficial in cases of dyspepsia.

Skin diseases, he said, were often produced by a fruit diet when first adopted, but (and here the homœopathic principle came in), it had been found that if the diet that caused the disease were persevered in, the disease would disappear, and the patient be much better than before the diet was adopted. This was accounted for by the fact that the chemical properties of the fruit loosened and drew out the poisons secreted in the system and finally got rid of them.

Having dealt with these and other objections to fruit, Mr. Wright went on to deal with its various advantages.

It was found, he said, most beneficial in gouty disease, as it helped the system to throw off the uric acid which caused them; then it was also extremely valuable in calcification of the blood vessels. It contained many important medicinal substances, such as iron, lime and phosphorus, also the very purest distilled water that it was possible to obtain anywhere.

He laid stress on the advantage of fruit as a diet for those engaged in mental work, owing to the fact that a meal of fruit gave the

digestive organs far less work than a heavy meal, and they would not in consequence require to draw much vital energy from the brain.

He advocated a plentiful allowance of fruit for children, owing to the amount of muscular energy and warmth supplied by it.

Mr. Wright then spoke of some of the remedial and preventive qualities of particular fruits.

Apple juice, he said, taken before a meal, without sugar, was an excellent remedy for acid dyspepsia. Cider was an antidote to the bacillus of typhoid fever, and it was also preventive against various forms of stone disease, these being almost unknown in districts where it was habitually drunk.

Perry he stated to be an old well-known remedy for fungus poisoning.

He considered oranges to be an extremely valuable fruit, both in acute diseases of a feverish nature like influenza and its bronchial and bilious complaints. Neuralgic pains, he said, could often be relieved by placing a cut lemon on the surface of the painful spot, whilst the juice of lemons (especially if the fruit had first been placed in the oven until the skin was soft) frequently allayed nervous palpitation of the heart.

The grape, however, appeared to be on the whole the most valuable of all the fruits mentioned, both as a food and a medicine; patients suffering from fevers or wasting diseases being frequently fed entirely on the fruit, with most satisfactory results. Mr. Wright mentioned it as one of the best remedies for the various complaints suffered from by children when teething.

Mr. Wright illustrated his lecture with most interesting diagrams showing the properties of the various fruits.—*The Homœopathic World*, 1 December, 1910.

The Catholic Spirit in Scientific Enquiry.

This is the heading of a leader in a recent issue of the *Lancet*, commenting on Dr. Donkin's Harveian oration. The phrase is fine sounding, and its importance was duly emphasized by the orator and editor. Narrow and one-sided enquiry is justly stigmatized as unscientific. Brave words, but a little catholic investigation of Homœopathy would be more convincing than anything else as to the fearlessness of these scientific enquiries.—The *Homœopathic World*, December 1, 1910.

Cancer Increasing.

From Bulletin 108 of the Bureau of the Census *Mortality Statistics*, 1909, it is learned that "Cancer showed a much greater proportional increase in the number of deaths than tuberculosis, rising from 33,465 for 1908, to 37,562 for 1909. The death rate increased from 74.3 to 77, the latter being the highest crude death rate thus far recorded for the registration area of the United States." The *Bulletin* suggests that "the saving of lives from tuberculosis and other preventable diseases" of early or middle life would "leave more persons subject to cancer at the cancer ages." Here, "as through a glass darkly," one can see the admission that if tuberculosis is staved off in one period it is only to have it show forth later as cancer, and this practically admits that the disease does not come from without in the form of the *coma bacillus*, but is innate in the afflicted one—hereditary.—The *Homœopathic Recorder*, January 15, 1911.

Japanese Method of Restoring Life.

A. Abrams states that kautsu, an integral part of jiu-jitsu, is the method resorted to by the Japanese for the restoration of those who have been "knocked out." It was also found to be effective in instances of sunstroke, drowning and injuries from other causes. The method is performed as follows: The subject is placed in the prone posture with arms extended sideways, and the operator with his wrist lands severely upon the seventh cervical vertebra with the regularity of a carpenter striking with a hammer. As soon as the patient recovers consciousness, he is placed in a sitting posture, his arms are rotated, and he is aided in walking. The latter injunction is regarded as mandatory in the application of kautsu, the object

being to completely restore the functions of the circulation and respiration, otherwise, it is said, the patient relapses into unconsciousness. According to the author, the essential feature of this method is concussion of the seventh cervical spine. This is one of the means by which the heart reflex may be elicited. The most effective instrument for this purpose is a pneumatic hammer. The author states that he has had an opportunity of gauging the efficacy of vertebral concussion in many acute infectious diseases implicating the heart, and he has noted the almost miraculous action of the method in question.—The *Homœopathic Recorder*, January 15, 1911.

Immunization By Inoculation.

"Artificial immunity," says Dr. Wilder Tilesen, of New Haven, in the *Boston Medical and Surgical Journal*, "to a given germ is caused in two ways: first, by inoculation with non-fatal doses of this bacterium" and, second, by its serum. It is a curious cycle. In the year seventeen hundred and something they practised inoculation to prevent disease. In eighteen hundred and something they passed laws forbidding, with penalty, the practice. In nineteen hundred and something the learned take up the old, forbidden practice and rush it to "the fore-front of modern medical practice," as something spic and span new. What has become of the old laws no one knows or cares. It is quite likely that if one could get hold of the books and papers of the old fellows who advocated inoculation three centuries back they would be just about the same as those of today barring the newly minted words.—The *Homœopathic Recorder*, December 15, 1910.

Auscultation in the Treatment of Fractured Ribs.

Dr. S. T. Lipsitz (*Interst. Med. Jour.*, October, 1910) advises that auscultation should be employed in all cases of injury of the chest where there is either ignorance, doubt or knowledge of fracture of ribs for the following reasons: It succeeds when other methods fail and is, therefore, more exact. It makes possible more accurate localization of the injury and is, therefore, a refinement in diagnosis. It is successful in subjects who ordinarily, on account of pronounced muscular, adipose or mammary development, render other methods unsatisfactory and unreliable. It affords the patient a minimal amount of pain, which is of two-fold value, as the diagnosis can be

made with greater accuracy and ease. Direct auscultation is not as satisfactory as the use of the stethoscope (preferably Bowles). The patient should inspire as deeply as possible. The sound is usually best elicited at the height of inspiration or during the beginning of expiration. It is a peculiar, hard, grating, breaking sound or a "click," which, once discovered over any portion of the chest, can be followed in the direction of its increasing intensity until, where it is most pronounced, the site of fracture is located.—*The Journal of the American Institute of Homœopathy*, February, 1911.

To promote Granulation in Wounds.

Dr. M. Baruch (*Münch. Med. Wochens.*, No. 35, 1910) reports from Bier's clinic that the following powder has given excellent results in stimulating granulation in wounds and ulcers: Silver nitrate 1.0, kaolin, sterilized, up to 100.0, thoroughly triturated and dispensed in black bottles. Unhealthy wounds covered with pus and fibrinous exudation cleared up with remarkable rapidity, even within one or two days. Necrotic areas rapidly separated, with active production of red, healthy granulations and speedy cicatrization. The effects were particularly striking in cases of burns. The fact that the powder can be applied to infected and dirty wound surfaces is considered by the author as a special advantage over scarlet red ointment. Change of dressing depends upon the amount of secretion, which is generally greatly increased during the first few days. At the beginning the parts are dressed every second day, and later every third or fourth day.—*The Journal of the American Institute of Homœopathy*, February, 1911.

Trichinosis and Boiled Ham.

Dr. H. Albert (*Am. Jour. Med. Sc.*, Aug.) concludes that the temperature essential to killing the trichinæ spiralis is not clear; it depends somewhat upon the degree of encapsulation and as to whether the capsule is calcareous or fibrous. Sufficient cooking seems the only certain method of destroying the trichinæ, though thorough salting and hot smoking are generally effective. In the epidemic observed by Albert all the fourteen patients recovered, the several symptoms lasting from three days to two weeks. In the blood counts made eosinophilia was a characteristic finding—a

valuable point in differentiating trichinosis from rheumatism, ptomaine poisoning and other conditions. This epidemic has taught Albert that : Trichinosis is more frequent than is generally supposed, being often mistaken for typhoid fever, rheumatism, ptomaine poisoning and the like ; the disease is generally caused by eating uncooked pork or sausage, but may come from insufficiently boiled ham ; a temperature of 170 to 200 F. from one to six hours is required to kill trichinæ ; cases vary in severity according to the number and vitality of the parasites ; the diagnosis is made easier by a blood count, as eosinophilia seems here to be higher and more constant than in any other condition ; eosinophilia appears in practically every case of trichinosis, beginning a week to ten days after infection (with the acute muscular symptoms) and being highest during the second or third week ; the eosinophilia varies from 10 to 60 per cent., and the total leucocyte count is usually increased, with the neutrophils relatively decreased.—The *Medical Times*, December, 1910.

Homœopathy in the *Encyclopædia Britannica*.

Close on the heels of the last issue of the *Encyclopædia Britannica* a new edition is announced, to be called the eleventh. The last complete edition was the ninth, but as this was somewhat time-worn, a series of supplementary volumes had to be issued to rectify this as far as possible, and these supplementary volumes constitute, we suppose, the tenth edition.

It may be remembered that in the ninth edition the articles on Hahnemann and Homœopathy were written by authors who had only hostility to Homœopathy to recommend them—one of these writers being on the editorial staff of the *Lancet*. This was rather a glaring piece of one-sidedness, and by way of antidoting the malady the promoters of the supplementary volumes, for some reason best known to themselves, invited the late Dr. Wm. Tod Helmuth to write a new article on Homœopathy.

Now Dr. Tod Helmuth was a very brilliant surgeon indeed, but nobody ever heard of him as a great materia medica man. In fact he had no special qualification for the task whatever, but that did not daunt him, and thus we find his article appearing as the last word the *Encyclopædia* had to say on Homœopathy in its supplementary volumes.

Dr. Tod Helmuth's article is inadequate and incorrect to a degree. To our thinking it is scarcely less objectionable as a presentment of Homœopathy than the frankly hostile one of the earlier issue. It devotes a large share of its space to a futile discussion of the eternal controversy of "Curentur v. Curantur," and leaves the impression that Hahnemann was very modest about his Law, and wished to imply that likes "may possibly" cure likes, but that he was not quite certain about it!

Now will this article appear in the eleventh edition? We fear so. Several attempts have been made to ascertain the truth, but so far in vain. We therefore advise our readers, when they receive the usual deluge of advertisements, to write to the Secretary of the Syndicate, who signs the letter inviting their subscriptions, asking him by whom the article on Homœopathy in the eleventh edition is written?

There is a story told of a great Chinaman, who sat next the late Mr. Gladstone at dinner, and who was charmed, like everyone else, with the brilliant conversation of the "Grand Old Man." Asked afterwards what he thought of him, the Chinaman replied that he thought his knowledge of all subjects except one was perfectly wonderful. The subject on which the information of the great statesman was all at fault was—*China!*

We need not amplify this. The western mind works in a different way. If Homœopathists find the eleventh edition of the *Encyclopædia Britannica* untrustworthy on the subject they know most about, they will know how to gauge the rest of the work, and will not be likely to empty their pockets for the sake of putting it on their book-shelves.—The *Homœopathic World*, December 1, 1910.

CLINICAL RECORD.

Foreign.

MAMMARY TUMOR CURED BY ONE DOSE OF
SULPHUR.

BY E. W. BERRIDGE, M. D.

August 9, 1900. Mrs. W. aged 49. Health bad during childhood and girlhood. Menses irregular for last six months. All her life weak and nervous. Father died of phthisis, with hæmoptysis, at age of 30, having been ill for two years. Two years ago subject to attack of sharp, cutting pains in abdomen, diagnosed as gall-stones, temporarily removed by purgatives; but if she does not continue the purgatives she becomes constipated and the pain returns. For fifteen years subject to throbbing pain in vertex. Always constipated since childhood. When and since nursing first child, born twenty-five years ago, has noticed a painless hardness of right breast; also of left breast to a less extent. For last two years, at intervals of from four to eight weeks, breasts have felt larger; had to remove clothes from them, and to turn over in bed very cautiously. Sleep very bad at times. Three months ago, noticed a hard tumor in left breast; an allopathic doctor diagnosed cancer; he treated her for a month, but without result. Then she was under the care of a homoeopathic physician for two months, who gave Conium every three hours for a month. This reduced the size of the tumor, and patient felt better in herself, stronger and more cheerful. Then axillary pains came on, possibly from overaction of Conium; the doctor then gave Colocynth in the same way, which made her worse. She took the last dose today. In the left breast I found a fibrous tumor about the size of a filbert; hard, rather tender, freely movable; in the right breast a similar but large tumor in the centre. Nipples not retracted. The right breast has not improved under the last treatment. For the last few days burning in the right tumor. Often at night the entire hands feel swollen, heavy, aching and burning; this has been so for a year or more. For several years burning of soles at night.

I ordered complete abstention from any medicine; enema to be used if necessary. I prescribed no medicine for a month, so as to give the Conium and Colocynth full time to act, to allow any

aggravation to pass off, and to obtain a clear picture of the symptoms, uncomplicated by medicinal effects.

September 7. Constipation unchanged; has ceased the purgatives, but had to use enema two or three times weekly. Has had three or four attacks of the abdominal pains, as before. The sensation of enlargement of breasts, with sensitiveness to contact of clothes had not returned since May. Less nervous. No return of the burning in tumor, or of the symptoms of hands or feet. Both tumors much smaller. As the curative action of one or other of the former medicines was still in force, I made no further prescription.

October 5. Constipation unchanged. Has had five attacks of the abdominal pain. The throbbing in vertex has been very severe. More nervous, fears to go out alone. Burning in right tumor returned once. The symptoms of the hands returned two weeks ago, and for the last week they have renewed every night, and sometimes by day. The burning in soles at night has returned for last week, and has extended all over feet. For last three weeks profuse sweat at night all over her, but chiefly on trunk. It comes on either on walking or a few minutes later. The tumors seem stationary as to size. The burning in feet compels her to put them out of bed to find a cool place. The former improvement having now ceased and new symptoms arisen, the evident *simillimum* could be selected, and I gave *Sulphur M. M.* (F. C.) one dose.

November 7. Constipation improved at once; has not used enema; bowels act alternate days, but stools still hard and somewhat difficult. No more abdominal pain. Throbbing in vertex better, and none for last week. Sleep better. Hands are swollen, with burning and aching; worse at night. Burning in feet better, sometimes only in left great toe. Night sweats rather better. On November 3 noticed pain in left mammary tumor, like a soreness, and tenderness to touch with sharp pain there. This has continued ever since. The left tumor seems about the same size. Burning in both tumors. Hands not so troublesome as during previous month.

November 23. Stools rather hard, alternate days, but no enema used. No more abdominal pains. Throbbing in vertex for last two weeks. Hands swell and burn more, but feet have been much better. More night sweats. The pain in left tumor improved on 24th, and has been much better since. Less burning in tumors, which are very much smaller.

December 21. Has not used enema. Only occasional throbbing in vertex. Symptoms of hand and feet recur at times. No more burning in tumors. Right mammary tumor much less; left tumor almost gone; but on the outer side of left breast is another large tumor, which she noticed about a week ago; it was then as large as the other left tumor used to be, but is now smaller.

February 2, 1901. Right tumor almost gone; left much smaller.

July 29. Writes to say that tumors are entirely gone.

A single dose of the *simillimum* acted better and more permanently than repeated doses of what was no more than a *simile*. Also to give repeated doses of two antipsoric remedies in quick succession, without allowing the first to expend its action, was an error. As for the diagnosis, I believe it was a case of fibrous tumors, occurring in a patient with a tuberculous diathesis. Nevertheless, the allopathic doctor said it was cancer; and we know that the allopaths are so correct in their diagnosis that it is generally confirmed by the *post mortem*!—The *Medical Advance*, December, 1910.

Gleanings from Contemporary Literature.

TYPHOID FEVER.

GAIUS J. JONES, M. D., CLEVELAND, O.

Typhoid fever is a preventable disease. The medical profession is agreed upon that, yet, in the language of the late Boss Tweed, "What are you going to do about it?" What are we going to do about it? What have we been doing about it since we have learned that it is preventable? During the Civil War more deaths were caused by this and other similar diseases, quite as preventable, than were produced upon the battlefield.

I had some personal experience in connection with the management of the Medical Department of the Army of the United States in 1861. The regiment to which I belonged was, like many others, camped along a small stream, the water from which was used for all purposes, and on either side of this were the camps and all that goes to make up a regular encampment of soldiers. It was utterly impossible to prevent the pollution of this stream, and as a result there were more deaths in our regiment from typhoid fever during the three months we were encamped there than were produced by all causes combined during the remaining two years of service. I contracted the disease, and after remaining in the service six months longer was discharged on account of the effects of it.

Thirty-eight years later there occurred another war in this country, and one would have supposed that after that bitter experience of four years we would have learned how to conduct a campaign without a repetition of the blunders of '61 to '65. Did that prove true? Anyone who studies carefully the history of the war with Spain will learn otherwise, and that which occurred at the camps of Chickamauga and Santiago was a disgrace to the American people and to civilization. The thousands that were taken sick with fever at Santiago were crowded three tiers deep on the boats, and, although they were unable to care for themselves, received but very little attention until they reached Montauk Point.

How much better are we doing in civil life? The City of Cleveland, where I reside, is situated on one of the great chain of inland lakes, and the situation with us is very similar to that of every city upon these lakes, in which a large portion of the people of the United States live. We take our water, which is used for all purposes from the lake, it being conveyed through a tunnel lying deep under the bottom of the lake. The in-take has been carried out farther and farther, until now it is five miles from shore. This is the third in-take which we have built; the first being a mile and a half from shore, the second three miles, and the present one five. The water is comparatively pure when the lake is quiet, but during storms it becomes very much agitated and all kinds of foreign matter are carried inward through the tunnel. The unfortunate thing about it all is that all sewage is allowed to escape into the river and lake. It is

absolutely impossible to keep a portion of this from returning through the tunnel, and, even if we did not receive any of our waste products, we are not quite sure that we would be free from contamination of the water by the sewage from cities farther up the lake, as Sandusky, Toledo, and possibly still farther—Detroit. In addition to that, the sewage from Cleveland is polluting the water for cities farther down—Ashtabula and Erie, Dunkirk and Buffalo.

Both the laity and the press seem to be taking considerable interest in this important matter, and I have copied an editorial from the *Cleveland News*, of April 4, 1910, which embodies my views exactly:

"In 1903 Cleveland underwent an epidemic of typhoid fever in the course of which 3,443 cases were reported and 472 deaths resulted. The scourge was traced unmistakably to the city's water supply. Agitation in favor of a filtration plant was carried to a high pitch and public opinion was favorable to such a safeguard, deeming it absolutely necessary to public health.

"That was seven years ago. The city has, as yet, no filtration facilities. There is no indication that it ever will have them. The epidemic of 1903 has passed from mind and the precautions then considered absolutely essential have been forgotten.

The city gets its water some thousands of feet further off shore than it did then and with the opening of the new in-take effort to obtain a purer water supply ceased. It has not since been resumed. Occasionally the health officials report the colon bacillus in the city water and advise citizens to boil it before drinking it. Only occasionally do typhoid cases become numerous enough to suggest an epidemic. As a rule, the disease does its deadly work—in Cleveland at least—systematically rather than spasmodically, carrying off its victims in comparatively equal numbers from year to year.

"Fortunately for the city's reputation, its fearful showing of 3,443 cases and 472 deaths is not accompanied by a statement that, except for extending the water tunnel, Cleveland has done nothing since then to prevent a repetition of the plague.

"Having learned in bitter grief that the water in her well was poisoned, Cleveland contented herself with dipping her bucket a little deeper.

"There has been no effort to stop the poisoning. It is true that the city is proceeding more or less desultorily with the construction of a great intercepting sewer system at an expense of millions. But when it shall be completed and put in operation Cleveland will still be pouring her sewage into Lake Erie at one point and dumping up her drinking water at another. The only difference will be that the points are a little farther apart, unless the outlet of the intercepting sewer is provided with a sewage disposal plant.

"This is a disgusting subject, of course. But no apologies need be made for it. As long as a great modern city, sitting beside a beautiful expanse of water, continues to be guilty on a large scale of practices which

no savage hunter, camping by a spring in the wilderness, would tolerate no one need justify himself for crying out against that wholesale indecency.

"Cleveland ought to complete the intercepting sewer, extend it along the whole lake front, install at its terminal a plant capable of handling the city's sewage and rendering it harmless before returning its fluid part to the lake, provide against pollution of lake or river from manufacturing plants, private drainage systems and other sources, and, probably, arrange some adequate form of filtration for the water that is now pumped throughout the city just as it comes from the lake.

"It is infinitely easier to say what ought to be done than to do it. There are excellent practical reasons why Cleveland has not done these things. Chief among them is that such undertakings cost a great deal of money—which is a reason not worthy of consideration in view of the fact that failure to do these things costs life. The cost of pure water was not greatly considered in 1903. The question then was not—How much will it cost? but, How can it be done best and quickest? If another emergency like that should arise—which, may Providence prevent—probably the question would be the same. Undoubtedly the city would concern itself more with life than with money, as long as the emergency lasted.

"If Cleveland's duty were done it would be possible to expect like precautions elsewhere. The state and nation would be appealed to for laws compelling equal respect for the people's drinking fountains. With Lake Erie, and others of the great lakes and their tributaries protected from pollution from shore and vessel, the communities along their border would be assured a supply of water as clean and harmless as it is plentiful, and would be spared the disgrace of poisoning the drink of others, if not their own."

Typhoid fever is a disease to which everyone is liable, and is due to a bacillus which lodges in the intestinal canal. It has been found in other localities, but it is found chiefly in the glands of the intestines, and of these glands Peyer's patches in the lower portion of the ileum are most frequently involved. It also affects the solitary glands of the cæcum and ascending colon, and the mesentery glands sometimes become involved also.

The glands which become involved in this trouble go through certain stages. The first is a stage of congestion or infiltration, when we get an enormous swelling. I have passed my thumb and finger along the intestine of a case that died the first week, and it seemed as though the lower portion of the ileum was full of faecal matter, but on cutting it open there was nothing but these enlarged Peyer's glands.

Next we get a stage of necrosis. The circulation is cut off from these vessels until the source of supply is absent; that is, the blood supply is not sufficient to keep alive the part, and it dies. Following that, if the patient recovers, we get a cicatrix. The ulcers do not always heal. If it were not for the excessive thickening we would get perforation more

frequently. We do get perforation in some cases, and this is the cause of some of the sudden deaths occurring during the third week. A patient with typhoid fever cannot have hæmorrhage or perforation in the first week, for during the first week there is only a swelling of the glands. During the second week we get necrosis and sloughing, and in the third week we are liable to get hæmorrhage, and possible perforation. Accompanying an attack of typhoid fever we usually have diarrhœa, from which a patient frequently does not fully recover. Then we find many of these cases suffering from chronic constipation and they have to be very careful about the diet. A great many of the soldiers who had typhoid during the Civil War are now suffering from chronic diarrhœa; that is, they have frequent attacks of it. It was just so in the late war. There may be a contraction of the bowel, and there may be a section of the bowel in which the ordinary structure is changed in character. The muscular coat cannot carry on the normal peristaltic action. When perforation occurs the opening in the peritoneal layer is very small, but the contents of the bowel escape into the peritoneal cavity. In the vast majority of cases we do not get ulceration. We simply have swelling of the glands, that swelling goes down, resolution takes place, and the patient—after three to five weeks—is comparatively well. You may have cases of slight ulceration and they recover in good time, but take a case of typhoid in which you have diarrhœa for two weeks, and perhaps have hæmorrhage during the third week, and it has to be handled with exceeding care or it will not recover. It takes weeks and months of careful management in a case of that kind to get your patient into any kind of condition. There is no disease which requires so much watchful care on the part of the physician and nurse as this disease.

The period of incubation of typhoid may be said to be from seven to twenty-one days, ordinarily about two weeks, but I have seen cases where it seemed to me that the period of incubation had been longer than that. There is difficulty in arriving at this decision, for the reason that we cannot easily tell when the disease began. This period of incubation is marked by a feeling of prostration; a tired feeling, as it is expressed. The patient feels disinclined to any mental or physical effort; has some slight rigors, and feels as though he could not stand the cold as well as usual. His sleep is somewhat disturbed by dreams, and he arises the next morning feeling prostrated and not relieved by his night's rest. Generally there is a feeling of despondency, a dread of some impending danger. The appetite is somewhat impaired. The bowels are usually constipated, but occasionally a diarrhœa comes on, especially if the patient has taken a mild cathartic. There are many cases which are much aggravated by the taking of cathartics at this time, and the diarrhœa continues.

The onset of the disease, so far as we are able to tell, is marked by some chilliness, not a distinct chill, as a rule, not like the chill of pneumonia or any other inflammatory affection but a continued feeling of

coldness for some hours, and then there comes a fever which is characteristic. This is a continued fever, and the degree of variation in twenty-four hours does not ordinarily exceed two degrees, unless the disease is complicated with malaria, which is sometimes the case. In malarial districts we have a greater variation than this, but you take the disease as it prevails in the New England and Middle States and there is a variation of not more than two degrees in twenty-four hours. This variation corresponds as to time to the variation that we get in health—lower in the morning and higher in the evening—and gradually increasing, so that at the end of the first week the fever has reached its height in many cases and remains the same during the second week. During the first week the pulse is comparatively strong. It is regular in the favorable cases, and corresponds to the temperature. It is not exceedingly rapid. We pay considerable attention to the pulse, as there is no disease in which the pulse is so good a guide. If the pulse during the first week ranges from 100 to 110 it is a moderate case, but if it reaches 120 during the first week we have a bad case, as a rule, unless it is affected by some nervous condition. During the first week the temperature does not exceed 103 ordinarily. If it reaches 104 or 105 it is a bad case. I have seen a case of typhoid with a temperature of 104 the first day. These are exceptional cases and indicate severity. Diarrhœa during the first week, not brought on by cathartics is a bad symptom. I would very much prefer that the bowels be constipated at this time. This trouble gradually gets worse until we get in to the third week, so that if we start with a bad diarrhœa which is bound to get worse during the second week, and possibly the third, we have a serious case. And so with fever. We expect a gradual increase during the first week, and sometimes the second. If it starts in at 103 or 104 the first week it is a bad case for the reason that it gradually increases, and by the close of the first week we have a very sick patient. But if it starts in at 101 or 102 and creeps up gradually, possibly by the close of the first week it does not exceed 103 or 104.

The skin is dry, with very little perspiration. We note perspiration with a great deal of satisfaction. If we have a moist skin by the end of the first week we look upon that as a favorable indication. Ordinarily the skin is dry and incapable of performing its function properly, and the poisons which are usually eliminated by the skin are retained in the system. The urine is scanty and heavily loaded with the ordinary solids. Occasionally we find later on some albumen and other abnormal ingredients. Then come the cerebral symptoms. We can tell something about the severity of the case by the mental symptoms the first week. Delirium is common. Occasionally delirium is quite active the first week. These are always bad cases. The patient who has to be restrained on account of active delirium the first week of typhoid fever usually dies the fever running up to 105° or higher. Occasionally this is the first symptom known, no one being aware that the patient is sick until the

delirium comes on. We have seen cases of this kind removed to the police station with the supposition that they had delirium tremens. Of course, the thermometer was not used in such cases or it would have told the story. The delirium, ordinarily is of a mild type during the first week. The patient is absent minded, forgetful, and is not able to control his faculties. You ask him a question, and if it can be answered in a monosyllable he will answer it correctly, but if he had to formulate a sentence he cannot do it.

A word in reference to the condition of the tongue. Such a patient will not be able to protrude the tongue readily. You ask him to let you see his tongue, and he will hesitate, and perhaps it will require a second command from you to have him protrude it, and then he gradually protrudes it and it trembles; or, possibly, the tip may catch behind the lower incisors and curl up, and with all the effort he can make he is unable to protrude it. When we get that symptom the first week it indicates severity, as it shows that the patient has not proper control of the muscular system. By the time we get into the second week we have the low muttering delirium and loss of consciousness. The patient will not be able to recognize anyone, or perhaps imagines that there are other persons in the room. He is filled with hallucinations and delusions. We have in connection with this a loss of control of the sphincters, involuntary discharges from the bladder and rectum, which continue until convalescence sets in. Sometimes the patient has only partial loss of this control. If the nurse suggests that there should be a discharge of urine it will be discharged involuntarily. It is often the case that the patient will call for the bed-pan, but before the nurse is able to bring it there occurs an involuntarily evacuation, showing that the patient has some thought of it but has not sufficient control to allow the nurse to make the proper preparation.

During the second week the symptoms are generally aggravated; the diarrhoea is worse, the delirium is much more active, the tongue has become more dry and perhaps cracked, and the patient has lost all control of it. He does not comprehend what you say. The skin is extremely dry. There is distension of the abdomen, with pronounced resonance upon percussion; tenderness in the ileo-caecal region if the patient is conscious enough to feel anything.

We have appearing upon the skin, in some cases, a characteristic eruption. There are little circular elevations which are slightly reddened, which disappear upon pressure, but return immediately. Sometimes this eruption becomes darker. These spots occur in successive crops, first appearing upon the anterior surface of the abdomen, in the epigastric region, and sometimes extending to the chest, and occasionally to the posterior surface of the body. I would not depend upon this as a symptom characteristic of the disease, but its presence is of course, confirmatory.

Then we go on to the third week. If there has been no variation up to this time we do not expect very much in most cases until the last of the third week. In the great majority of cases the patient shows slight improvement at the beginning of the third week, and then the fever goes down, so that by the close of the twenty-first day it has about subsided. We find the tongue becoming a little more moist, the pulse becomes more regular, and the patient has a little more control of the bladder and rectum. Then, too, he makes some inquiry in regard to his friends and is capable of recognizing his relations. He loses his hallucinations and delusions, and gradually the fever subsides.

It is a *dixero* which is exceedingly difficult to diagnose. It may be taken for a malarial fever. The most positive method of deciding would be an examination of the blood for the presence of the plasmodium malarie, but that would not prove that you had not a typhoid condition. You might be able to get typhoid germs as well, as we have recorded a large number of cases where both tests gave positive results. We had in our hospital a returned volunteer from the Spanish-American war, in whom were found tubercle bacilli, the plasmodium malarie and the bacillus of typhoid. It becomes quite important as regards prognosis to determine whether the patient is suffering during the first week from malaria or typhoid. It is probable that in many cases the microscopic test will be unsatisfactory; usually you have to depend largely upon the clinical history. We find in malarial cases that the patient is not much prostrated, that there is a tendency to great variation in temperature, and no tendency to diarrhoea. It will take ordinarily several days for us to be able to tell whether the case is one of typhoid or not. The tendency to tympanitis, and possibly diarrhoea, would aid us some in this direction. In regard to the tests of typhoid, they are not as positive as those for malarial fever. The blood test in malarial fever is generally accurate. I had a case in the hospital last year—a young man who had four weeks of fever, a week of convalescence, and three weeks more of relapse. The usual test did not at any time prove that he had typhoid fever. That demonstrated to me that we cannot depend upon these tests altogether. Acute tuberculosis may be taken for typhoid, and in such a case we find that the pulse is exceedingly rapid, that the fever is not quite as continuous, assuming more of a remitting character. Perspiration is usually present in all cases of tuberculosis at some period of the twenty-four hours. Puerperal fever is another disease which might be taken for typhoid. I have seen cases of typhoid fever coming on after delivery and taking the regular course. The first thing we would be a septic condition and peritonitis, but there would be absence of the usual symptoms which accompany that disease. It is more common to find malarial fever occurring in child-birth than typhoid, but I have seen typhoid in a number of cases. We would very soon note the mental symptoms and absence of the usual symptoms which occur with puerperal peritonitis. There would not be tenderness over

the uterus and abdomen generally; neither would we get as much tympanitis in typhoid as in these cases, and the fever ordinarily would not be as continued as in puerperal fever. Two or three days will tell the story generally. In malarial districts you will find that it is rather common for women to have malarial fever after child-birth. I remember how in malarial districts we watched over these cases with a great deal of anxiety, for fear that the fever which the patient had was of septic origin. Malarial fever is a very mild affair compared with puerperal fever.

Pneumonia and bronchitis may be mistaken for typhoid. Bronchitis, which is acute, has well marked fever, but ordinarily we have less of the prostration with the characteristic respiration. Pneumonia comes on with a well marked chill. There is none of the clouding of the intellect we get with typhoid. La grippe is a disease which would probably be taken for typhoid more than any other. This disease has been prevalent in this country since '89, and I have had considerable trouble in distinguishing it from typhoid, but la grippe comes on more suddenly, as a rule. The fever is continuous for several days.

TREATMENT.—There is no disease in which so much depends upon the general management and diet as this, so that the treatment may be said to be largely what was formerly described as the expectant method, which is really a hygienic method. It would be utterly impossible to treat a bad case of typhoid successfully and feed the patient solid food, or, if he was subject to diarrhoea, and possibly hæmorrhage, to allow him cold drinks freely.

A patient suffering from typhoid cannot be treated successfully unless he is put to bed, and great many cases object to this. I would not allow any one suspected of having this disease to continue about his business. It is a common thing during an epidemic of this sort to tell the patient, "You are running down, looking badly, and the best thing for you to do is to go to bed, because it is possible you may be the next victim of the disease." The patient is put to bed and kept in a room that has a temperature of from 65° to 73°, according to the degree of fever which he has, with just ordinary bed clothing—not more than usual, even a little less in some cases. The rooms should be properly ventilated, without any draught over the patient. You should be careful about the temperature at night, as in houses with an independent fire in the room the fire frequently goes down.

The question of bathing is an important one. The cold bath was formerly used by many physicians, and is to some extent now the main reliance of the dominant school. The Brand method consists of putting the patient in a cold bath of 65 to 75 degrees when the temperature is up to 102 degrees, and leaving him there fifteen or twenty minutes. I claim, that the shock to the system from this treatment overcomes any benefit which may be derived. You force the temperature down too suddenly—two, three or four degrees in twenty minutes—and you shock the patient.

The consequence is that it requires considerable time for the patient to rally.

At the close of the Spanish-American war there came to our city a large number of sick veterans. These were divided pro rata around the two hospitals, and no choice of cases made. They all had fever, with very few exceptions. There was something over two hundred in each hospital. I do not know whether this appears in the statistics of the hospital, but it is a fact that there were only two deaths in the Cleveland Homœopathic Hospital and nineteen in the allopathic hospital, where they were all given the cold bath. My method is to give the patient a sponge bath of tepid water, taking only a portion of the body at a time, exposing only that portion and spouging it and allowing the water to evaporate. In that way the patient gets considerable relief. This can be repeated once in six hours, but ordinarily I do not bathe the patient more than once or twice a day at the time the fever is the highest. This is done in bed, with the patient thoroughly protected with blankets, so that the clothing does not become dampened.

The diet is most important in typhoid fever. The patient who has no trouble with the stomach or the bowels, no colic or diarrhœa, can be fed ordinary milk. From four to six ounces should be given every two hours. A patient who was strong and vigorous at first possibly might take eight ounces, but ordinarily four ounces every three hours is sufficient, and this should be given as regularly as the medicine. The patient cannot tell when he wants his food or drink, and it is wrong, to disturb him by asking him what he wants, so the nature is instructed to give the medicine on the hour and the food on the half hour, and just as regularly. The quantity is to be prescribed, the same as the medicine. If the patient is resting quietly he is not to be disturbed at all. When there is diarrhœa you cannot give him milk and you must not attempt it, as it is solid food as far as the bowels are concerned and is very liable to disturb them. I use for bad cases of diarrhœa, when there is considerable pain and colic, Imperial Granum. This is a kind of food prepared from wheat. This is made into a thin gruel with water, cooked at least fifteen minutes, and to this is added, in most cases, a teaspoonful of cream to every two ounces. This is given in the same manner as milk. Horlick's Malted Milk is another preparation which I have used sometimes all the way through a fever. Patients often like it. It is prepared similarly—made into a gruel and given warm, or hot. The flour ball is a preparation which most people know how to make, and this is a fine article of food in cases of diarrhœa. Take ordinary white wheat flour and put it into a sack, which should be ten inches long and five inches in diameter. This is set in a kettle of cold water and put on the stove and boiled three hours, then remove the flour and dry it by slow heat until it has become hard. You can then shave it off, when it forms a powder. This can be made into a gruel and given in cases of this kind. I have given it for weeks

in cases of typhoid fever. A fine gruel can be made also from the Cream of Wheat.

Solids must be prohibited. As the fever subsides I allow the use of animal broths, but ordinarily no animal broth should be given until the fever is down below 100°. This can then be given regularly and systematically. Do not make a thick soup, but plain animal broth. I do not care for chicken broth as much, although it may be given, but mutton broth or beef broth may be given in alternation with malted milk or Imperial Granum, increasing the quantity gradually and continuing such food until the bowels become normal, when a little solid food may be added to the broth. Mention in your directions just how many crackers are to be given, and look at the size of the crackers. Then perhaps you could allow a little soft toast with a cup of tea. Green tea is a good remedy in these cases if they care for it. The patient has now perhaps been without fever for ten days; the bowels have moved naturally, and you want to give solid food. The best thing then is to take lean beef and scrape it across the grain with a sharp knife. Of this you can make a little patty and boil it. It is more palatable, and in most cases the most satisfying of anything you can give, and with this you can give a baked potato, or a little toast. Of course, you want to see that the potatoes are all right, and that they are cooked properly, not heavy. Later you can give a soft egg. I have used baked apples considerably in cases of convalescence. The apple should not be exceedingly sour, but just tart enough to be palatable. This will aid in the digestion of the other food as well. Gradually you approach the diet of health, so that it will be about four weeks from the time the fever ceased before he can eat a regular meal. You should give instructions after you have ceased your visits as to what he is to be fed.

I would give cool water to a case when I was giving milk and the bowels were undisturbed, giving not more than two ounces at a time and not oftener than every half hour. I give as drink, where the bowels are disturbed, hot water that contains something slightly nourishing, rice or toast water, properly made, giving it in the same manner as water.

These patients should be kept in bed until the pulse is normal in frequency and is reasonably full. Many of these patients get up too soon. The heart, like other muscular tissues, shrinks in this fever and becomes lessened in size, in some of these cases 30 per cent., so that an adult will have the heart of a child. You get a patient of that kind up and you soon have his pulse up from 75 to 125. A man with a pulse like that is in danger. You have to get these patients up carefully. When he is convalescent you allow him to be bolstered up to about 45 degrees for ten minutes, or possibly fifteen, once a day, and then twice a day, gradually increasing the time. You gradually slip out the pillows, allowing him to remain sitting up. In bad cases it would be at least ten days from

the time the fever left before he would be able to get into a chair. The nurse should understand that she should use her judgment about this, and, if she notices the patient is tired and pale, she should put him to bed at once.

In regard to remedies, the one which I depend upon in a great many cases of typhoid fever is Gelsemium. I use the second dilution, ten drops in four ounces of water, giving a teaspoonful, or sometimes two every hour, and continue this ordinarily for a week, as long as the symptoms seem favorable and there are no indications for another remedy. Baptisia is a remedy that is used by some. I used it years ago but found that I preferred Gelsemium, and for the last ten years I have scarcely used Baptisia at all. I rarely give Aconite in a case of typhoid fever. Belladonna is a remedy that is occasionally called for. You will find cases in which the patient has a high fever and is drowsy and stupid. There is the hot skin and drowsiness, and some change in the condition of the pupil—either contraction or dilatation, for you find both these conditions in the provings of Belladonna. Perhaps there is some delirium, but the delirium is not of the low muttering kind that you get with Hyoscyamus. It is more of the active sort. Belladonna ordinarily can be given for a week. Bryonia is a remedy which is called for perhaps as much as any other after Gelsemium. I would not give it in the first stage. We have quiet, morose condition, and the patient hates to be disturbed. We have some irritation of the pleura, or of the joints. Rhus has the reverse condition. The patient is restless and can not lie still for any length of time. He changes from side to side, and is greatly prostrated. There is a condition which is spoken of in some works. The tongue having been thoroughly coated, the coating is removed from a triangular section of the tip. The Rhus patient is generally worse at night. Rhus covers also the eruption which we find in this disease. It is not contra-indicated where we have diarrhoea, but I would usually prefer some other remedy. A remedy which I use more than any other in diarrhoea is Croton tig., and I believe it will cure more cases of diarrhoea than any other remedy. The diarrhoea is aggravated by taking anything into the stomach. There is considerable colic preceding the stool, and the stool is sudden, gushing and accompanied with the discharge of a great deal of gas. I use the 6th attenuation and give it in the ordinary way. Aloes I have used in a few instances. There is often a kind of involuntary movement of the bowel which is not due altogether to local conditions, but to a paralysis of the muscles of the bowel from some remote cause. The patient has a muttering delirium. He has hallucinations and delusions, and you have to use strategy to keep him quiet. These are cases for Hyoscyamus. Stramonium is not called for very often, but we have in such cases a more active delirium, and the mind is a great deal brighter. It is not the occasional stupor of Hyoscyamus. Patients are not so obstinate, and are more inclined to be good humored.

During convalescence there are a host of remedies that may be called for, but do not give a remedy because the case is typhoid fever, give it because it is indicated. During convalescence we frequently get profuse perspiration at night, and a tendency to coldness of the extremities. The circulation is weak or possibly the patient at some particular time of the day or night has an aggravation of some sort. In such cases China is the remedy. I have given it more than any other remedy during convalescence. I use the third trituration—either powder or tablets—two grains every two hours, and continue it for a considerable time.—*The Journal of the American Institute of Homœopathy*, February, 1911.

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HOW SHOULD PATIENTS REPORT THEMSELVES
HOMŒOPATHICALLY?

By DR. E. MAHONY.

THE correct answer to this question is clearly of vital importance to both patients and their doctors, as it very largely affects the prospect of a successful result in treatment. First then, let a few simple points be borne in mind as general principles, which underlie the whole question. (1) One statement of the discoverer of the true law of healing, Dr. Samuel Hahnemann, was, that this system was as different from all other systems, which had hitherto appeared in medical writings, and not only as different from, but as opposite to, as light was opposite to darkness. (2) A vital point in homœopathic treatment is individualisation. (3) The truth of the unity of the body proves that there is no such thing as a local *disease* of any part, apart from an affection of the entire system. (4) (And this is very little understood), that a disease progressing towards *cure* goes from above, downwards or from within, outwards, and conversely that symptoms passing from below, upwards or from without, inwards are danger signals. (5) Alternation of medicine by routine, for example, one night and morning and another twice in the day, is contrary to the Homœopathic law, because a medicine, if given on the principle of similarity, commands the entire person, and cannot be

replaced until some change in the condition shows a call for a change in the administration of the medicine. (6) The law of similarity and the treatments founded thereon are illustrations of scientific facts, hence every *fact* has a value and is to be mentioned. There are many other points rise in the mind when considering this vast and important subject, and doubtless one and another will come in its place as we pass along; but the above will give a groundwork of substance and satisfaction to anyone who will reflect on them, and enable those who do this to give a useful "image of the disease," as Hahnemann expresses it, and thus avoid the many pitfalls into which so many have fallen, thus seriously complicating a subject already sufficiently difficult to carry out constantly, honestly and fully.

Now to start with the first remark, that the Homœopathic system is as opposite to all other medical systems as light to darkness, it is evident that, if this be true, it must involve looking at the whole subject, both of the nature of disease, the remedies recognized for its removal (usually called *materia medica*), and their application; and I shall therefore briefly outline and in as unprofessional language as I can, what Hahnemann taught on these three subjects:—(1) The nature of disease. He says (I don't give his exact expression, wishing to avoid technicalities) a vital force animates the organism, and keeps it in harmonious order, and in disease this vital force only is primarily affected and expresses its sufferings—"the internal change"—by unnatural sensations and functions. This clearly shows the importance of recognising immateriality, *i.e.*, vital force as preceding, and being a cause of the materiality; this latter appeals to the *material* senses, sight (eruptions), hearing (a block from wax or matter), feeling (a swelling), tasting (sweet, sour), smelling (various odours), for which usually relief is sought. This shows too the importance of mental and moral symptoms, and why these should take a first place in the selection of a medicine. Why does exposure to the same adverse influences, whether of external circumstances, weather and general surroundings, or the more painful disloca-

tions of family relationships, affect different persons with such different kinds of spirits and emotions, but because their immateriality is different and therefore differently affected?

This opens up a very very great matter. Hahnemann goes into this very carefully, and asks whether such various material names as frequent epistaxis, *i.e.*, nose-bleed, varicose veins, hæmoptysis (bleeding from the lungs) and other hæmorrhages, night sweats and diarrhœa, parchment-like dryness of the skin, "tedious ailments of both the body and the soul," cancer, consumption and many others, are not outward results of an internal affection of the vital force which he calls psora, and which works in secret in the system days at least before outward visible symptoms are manifested.

Let it be understood then to be of the first importance to notice how the mind and the emotions are affected in any complaint, capacity for work or the reverse, indolence or industry, depression or elevation of spirits, good humour or anger, and all such changes should be mentioned, not avoided or even denied as is sometimes done.

(2) Individualisation. This is a thing that in a limited sense everyone is aware of; for example, that if exposed to the same unsuitable outward circumstances, as conditions of weather, confinement in close rooms, interference with regularity in the requirements of everyday life, as meals, time for recreation and many other things, no two persons will be affected in exactly the same manner, yet that this applies to all disease is not recognized, hence the thought that a particular medicine is *the* medicine for a particular disease is most common. One day a young lady, after a short conversation on general subjects abruptly changed the conversation, with the remark, "Now Dr. Mahony to come to the practical—what is good for headaches?" On one occasion, when the so-called Russian influenza was in Liverpool, I had in one family, three members with undoubtedly the same disease, yet each one required a

- different medicine, owing to the different symptoms which the
- same disease brought out in their different constitutions. There

may be it is true, an identity, sometimes called a golden thread, running through every case of a special epidemic, but that does not interfere with the other fact of individualisation.

(3) The unity of the body—this truth though no doubt admitted in words by most persons is very little believed in actually, else why the constant idea that an eruption, a cough, an attack of indigestion and in fact suffering of any part, is looked at as an affection of that part, and isolated in the thoughts from the rest of the person. Something for “a breaking out” is asked for, or for a cough, or a pain in the head, or chest, or limbs, or so forth.

(4) Directions of pain or other suffering from above down, from within outward, and the reverse. If the thought be borne in mind that from above down, or from within outward, is of necessity going further from the centre or source of life and sustainment of life, internal parts and limbs towards their extremities, fingers and toes, it will not be difficult to understand why one direction is good and the other bad. Hence, too, what often alarms patients, namely the appearance of a breaking out on the skin or on the mucous membranes of the nose or mouth, is often a sign of great improvement, and may be taken as certainly so, if the patient is at the same time feeling decidedly better in himself or herself.

(5) Alternation of medicines. In speaking of this, I have used the expression in routine; now the important point here, which proves the falsity of routine alternation is as Hahnemann in one place remarks, never to treat one symptom but always a combination of symptoms, for example, if a person has certain symptoms in the chest, as cough, symptoms of inflammation, fever and certain others pointing to the digestion being disordered, as pain after food, flatulence, constipation or the reverse, and so on, it would be unhomœopathic and quite wrong to prescribe one medicine for the chest sufferings, another for the stomach affection; but the nearest medicine to cover both is required, and not be changed until there is proof that it has done all that one medicine can do, and then any symptoms

still remaining must be taken into consideration, along with any fresh ones that may appear, and a fresh "image of the disease" brought to light to receive its quietus, and this process continued until cure results. Patients sometimes say to me, "You have put in something for ," mentioning some local pain or discomfort, and I reply: "The medicine I have given you is for *you* in your present condition, and what you have mentioned is a part of *you*."

(6) The law of similarity is a law of facts. This sets aside at once all mere suggestions or empiricism as it may be termed. Whatever is a fact has a distinct and reliable place in all treatment, however much it may contradict previous notions on the subject. Some neuralgias, for example, are better in the cold than in the warmth; so some coughs are worse on entering or being in a warm room; some pains in the limbs or elsewhere are relieved by exercise, and rest is unendurable; and this kind of peculiarity runs through whole spheres of the system and different tissues—the respiratory, digestive, muscular, cutaneous, hence it never does to say, of course I am worse or my cough or pain is worse when I move, change my position, etc.; the one thing to do is to notice what does affect for better or worse any particular organ or part of the body, and even things which may seem to the mind trivial or even ridiculous are to be noted and valued.

Why should hearing water run from a tap or the pouring down of a small cascade excite certain spasms, yet prompt relief comes to such on the administration of a medicine having that peculiarity. The importance of bearing this in mind in cases of hydrophobia is well known. In this connection it should be borne in mind that the original source of the present complaint may be far removed from the local symptoms for which relief is sought; some serious injury years before or inhalation in some way of a deadly poison, for instance *non-smelling* sewer gas, which is far worse than the offensive variety, may have given a shock to the system which the remedy for that particular infliction will alone suffice to cure. Hence the

importance of going over what may be called the medical history of a patient even from birth.

I once had a patient, a young lady, in advanced consumption, when after many interviews it came out in conversation with her mother, that when a baby she had had some vesicles on her feet, said vesicles being evidently from the detailed account, what are commonly called itch vesicles, and which were of course promptly, it was said, cured by an ointment; really suppressed.

Now had this fact been known before consumption showed itself, and the condition which was the cause of the vesicles forming been cured, that life might, at least, have been prolonged for years, and with corresponding health. All this is in accord with what Hahnemann foresaw, and taught openly and fully in his remarkable writings; from which writings, as well perhaps as from those of some of his compeers, I shall now make some extracts or references to show that what has been advanced is strictly in accord with them. It has been already stated that he maintained that in all disease an immaterial something has been attacked before the material symptoms are there to be observed—this immaterial something has received various names such as vital force, vitality, dynamics, force, spirituality; it matters not much what word is used, provided the thought is clear in the mind that something untouchable to our material senses of sight, hearing, smelling, tasting and handling has been affected before material results are there to be seen, heard, felt, etc., hence for remedies to act efficaciously they must contain in themselves a corresponding immateriality, and the other properties of weight, size, colour, taste, etc., are all beside the mark, as are also the material properties of the patient, though these might be immense in their difference for example an elephant and a cat. If once this fact is received there is no difficulty as to the amount of the medicine, its colour, taste or any other material property whatever. Under the law of similarity the medicine is administered solely on account of its known

curative properties, proved because it has been known to cause in healthy persons symptoms similar to those the complaint to be treated is now causing.

This "curative power," we read, "cannot be presented in a tangible form, but can only be recognized by its effects in the living organism"; and again "the reason why the Homœopathic doses have such an uncommonly powerful effect, is this: that the organism is not obliged to expel them in the same sudden and violent manner as the large doses prescribed by the Allopathic physicians."

The order in which symptoms are arranged in the *Materia Medica* are as follows:—Mind and head, face, eyes, ears, nose, lower jaw, teeth, tongue, saliva, throat, taste, eructations, heart burn, hiccough, nausea, vomiting, desire of eating and drinking, stomach, abdomen, lumbar region, uterus, abdominal ring (frequent locality for rupture), rectum, anus, stool, bladder, genital organs, sexual instinct, generative faculty, catarrh, cough, breath, chest, region of heart, back arms, hands, hips, nates, thighs, legs, feet, common affections of the body and the skin, complaints in the open air, exhalation, temperature of the body, liability to colds, strains, paroxysms, spasms, paralysis, weakness, swoon, yawning, sleepiness, sleep, nightly complaints, dreams, fever, chills, heat, sweat, anguish, uneasiness, tremor, changes occurring in the feelings, affections of the soul.

The above list shows how everything is to be considered, and has its due place, beginning always with the moral and mental. How do you feel when you have a headache? pain in the side or elsewhere? is often a good question to ask, and the answers are most various, and the way they are made, the tone and manner are often a considerable guide to the moral conditions of the person. The body may be said to be divided into spheres, such as the digestive sphere, the respiratory, the sexual, urinary, motor, that is the muscular, and it is always well whatever symptom shows itself, to follow out that sphere, for instance in the digestion, if there is heaviness after meals, or pain, to follow down and note whether there is constipation

or the reverse, and so if there is a cough, whether the chest is in any way affected, rattling in it or pain and so on with the whole of each sphere; because sometimes an apparently insignificant and remote symptom gives a clue to the whole, for it must be borne in mind that many medicines have a large number of very similar symptoms, and can only be differentiated by one or two small symptoms; thus many medicines have symptoms very like those of *Aco.*; but if in such a case there are found the peculiar restlessness of *Aco.* and above all the fear of death predicting the time, these two conditions would make the choice conclusive.

Let it be noted further, that great importance is to be attached to general conditions, such as open-air, liability to colds, strains, also seasons of the year, spring, summer, autumn, winter; and again what are called in our author, fevers—which means something very different from the popular meaning of that word, here it will be well, perhaps, to say that there is no thought of infection in the use of the word fever, generally, in Homœopathic writings; but that wherever persons are conscious of a varying temperature in the twenty-four hours, apart from the question of exercise or heated or cold rooms, three things should be noted, namely, chill, heat and perspiration, and the order in which they occur—as also the locality, as the head, chest, abdomen, limbs, sides of body, and of perspiration, its character, odour, whether profuse or slight; these are evidently points that the doctor, has not the opportunity of observing for himself, especially in conditions where persons are able to walk about and pursue more or less their usual avocations, and yet most mortal diseases such as cancer and consumption may be insidiously undermining the most robust looking individuals.

It just occurs to me to state here that patients *writing* to a doctor should make it unmistakably clear in their signature whether a man or a woman is the writer and if a woman, whether she is married, single or widowed. Awkward mistakes have occurred where this has been overlooked, such as a patient

addressed as Miss , replying, "I may state that I am a widow and have had thirteen children." Let us now take up the above mentioned arrangements of organs and localities a little more in detail, and first the mind; which briefly may be divided into emotions and intellect. (a) Emotions—anger, good temper, fear, courage, depression and vivacity, pessimism or optimism, sorrow, hopelessness, despair, and under this last rubric may be mentioned tendency to suicide, and if so in what form, by hanging, drowning, the knife or any other. It should be remembered that the provers of the different medicines have experienced the *sensations* of every kind which in disease or from poisonous doses have caused every variety of action from murder to suicide and that in every variety of the same.

A gentleman in perfect calmness once said to me: "I am enduring the torments of the damned"; and there is a symptom under one medicine in the *Materia Medica*. "He imagines, he suffers infernal torments, without being able to explain himself." Another has "He is fearful lest his living body should decay; she tries to throttle herself, and begs those around her to kill her; she says the time had now come when she had to die."

A patient admitted to me, recently, that when irritated by his complaint, he felt as if he could kill any one who crossed his path without compunction; he received the corresponding medicine with marked relief. These illustrations might be multiplied almost *ad infinitum* and prove abundantly the importance of considering the emotions or moral symptoms as of the first importance.

Now as to the mind or intellectual. Under this heading would come absent-mindedness, deficiency of memory for places, circumstances, what has happened, is about to happen, what one has just done, said, memory of names etc., capacity for mental work, literary, artistic, mathematical, fondness for calculations and anything else there is a fondness for, which involves the mind; confusion of mind, delirium of any kind. I once saw a man under the influence of drink, and the amount

of knowledge he showed he possessed in his wandering talk, amazed me, and was quite beyond what I should have supposed him to have had from numerous opportunities of conversation about the health of his wife or family. In his case the two medicines which usually in a short time brought him round, both have strongly marked mental symptoms. In another case an eruption on the hands was strikingly relieved within a week, by considering the mental condition of the patient. These illustrations and instances will suffice to show the importance of reckoning with the immaterial part of our being, both morally and mentally, and giving whatever individualises us in these respects, a primary place in a medical report of ourselves; but before going to the material part of our nature, let it be understood that three things should as far as possible be noted in every complaint: (1) The symptoms; (2) The accompaniment of the same; (3) The conditions.

(1) The symptoms—pains, aches, unnatural sensations, and where they are felt, and any unnatural swellings or deformities of any kind whatsoever.

(2) The accompaniment of the same, as, for example, when in pain, heat or cold of the affected part, the effect on the spirits which are more varied than many persons are aware of, other organs or parts of the body affected at the same time, *e.g.*, with headache, nausea, vomiting, general chills, perspiration, etc., and so on, throughout the body; disturbance in any one part or organ of the body may be *accompanied* by disturbance in any other, and it may be of quite a different character, heat in one part may be accompanied by coldness in another; therefore all such points should be noted; never mind about understanding the why or the wherefore; give the record faithfully, and let the doctor do the thinking.

(3) The conditions; these are again of the very greatest importance and apply to both surroundings and individual movements, actions, positions. Some neuralgias are improved by going into the open air, some coughs by this also, and

correspondingly are brought on by entering a warm room. Many complaints are worse by thinking about them, some are improved by doing this. Some pains called rheumatic are greatly aggravated by the least touch or movement, others relieved by just the same conditions. Some internal pains of the chest or abdomen are relieved by lying on the affected side. Many complaints are relieved by lying on the right side; others by lying on the left; some by lying prone, others by lying on the back; some come on during sleep, arousing the person, others on or soon after waking. Again all hours, both of day and night have their periods of aggravation or amelioration, and sometimes to get these points accurately, will make all the difference between a similar and most similar medicine, and the latter is the curative one.

Passing down through the above mentioned arrangement of symptoms in the *materia medica*, it should be always remembered that patients are simply to report what they are aware of in sensation and appearances (the immaterial and material) in their own language, because the original *materia medica* of Hahnemann and his compeers consisted of what persons, men and women, experienced in sensations and appearances as the result of taking the different medicines, constituting thus what Hahnemann speaks of as "the pure language of nature." Hence it would be right here to say "I feel" or "it feels as if"—or if material "it looks as if" and any comparison that occurs to the mind will suitably come in, because we learn everything by comparison or contrast with something of which we were already aware; then there will be peculiarities in each organ or function, *e.g.*, in the face, what expression is produced, noted by oneself or others; in the eyes, varieties in sight, and appearances before the eyes, colours, moving objects, peculiarities of good sight, as long sight, short sight, colour blindness; desire for light or on the contrary preferring a dull light, (often an early symptom of cataract) the protruding eye, sometimes indicating the serious condition of *Glaucoma*;—then again in the ears, the varieties of deafness are most varied, as well as varieties of sounds heard.

In the nose again, loss of smell, acute smell, illusions of smell, all have a meaning.

Then coming to the digestive sphere there are peculiarities in some persons in the movements of the tongue. It occurred to me once while considering what medicine to give to a very young child with what is spoken of as *Bronchial Catarrh*, to note the peculiar way in which he repeatedly protruded and withdrew his tongue, and only one medicine known to have that characteristic movement, gave prompt relief and cure to the whole condition. There were of course other symptoms, completing "the image of the disease," but that one differentiated between the others having the catarrhal symptoms.

The Teeth.—Varieties of pain here should be described as well as localities as far as can be, upper or lower jaw back or front teeth. Then the tongue, coating of whatever kind, or unnatural appearance or moisture or dryness in a perfectly clean tongue, and unnatural taste in the mouth, or of any article of food or drink or absence of taste; the saliva too much or discoloured; then as regards the throat, difficulty of swallowing in general or of particular articles of food or drink (many persons are not aware that often liquids cause more difficulty in swallowing than solids) next effects after swallowing, as pain, distension; here the kind of pain, how soon after a meal, and what substances in particular are likely to cause disturbance. Here it should be mentioned that peculiarities in this way are not fads, but peculiarities of the digestive function which require treatment for cure; and it is a great mistake to force either children or adults to swallow what others can enjoy, when instinct in them resents this compulsion strongly.

In nausea it should be noted where the sensation is felt, it may be in the throat, lower down or elsewhere, and the effect of food, whether it causes aggravation or improvement or it remains unaffected—so of vomiting, what the vomited matter is like, colour, taste, etc.

The abdomen in a general way should be considered as the whole of the front of the body from the navel downwards, and

localities here are often very important and one may observe that here, as elsewhere, the side on which the symptoms are felt should always be mentioned, as there is a great distinction often between right-sided and left-sided medicines.

In the lumbar region, with which may be taken the limbs upper and lower, an important point to notice is the effect of movement, rest, all kinds of positions as standing, stooping, straightening up, raising either limb. As regards the bowels, not just a statement that constipation exists or a tendency to looseness, but the character of the stools, unnaturally large or small, and any accompanying symptoms, as headache, depression, and in the case of hæmorrhoids whether blood is before, during or after stool, whether bright red and jerking out, or dark and oozing. In urinary complaints if there is a sediment, whether gritty, or soft, adherent, and as in all functions and organs, whether there is perverted function of any kind or something that should not be there in health. In the sexual sphere the same care should be taken to report whatever is *unnatural* in sensation or function, or malformation of any kind if such exist, and it should be remembered that prudery is as great a mistake as indelicacy would be, and great and long-continued sufferings have often ensued from this false delicacy. In the respiratory sphere the difference between expiration and inspiration in affecting the other symptoms is important, as also in coughs, *where* the irritation is felt causing cough, and if expectoration is present its appearance, colour, taste, whether easily raised or difficult, sometimes it is of necessity swallowed. In palpitation of the heart, whether it is interrupted, very rapid, visible, and under what circumstances it is most likely to occur. Coming now to general symptoms such as paralysis, swoons, whether the paralysis is in movement or sensation, whether in fits there is complete unconsciousness.

In reporting as to sleep, first its general character, heavy or easily disturbed, restless or quiet, position; here unusual positions are often very instructive; also if there are particular

hours of wakefulness and the *character* of any dreams that may occur.

In reporting fevers, the thought of infection as necessarily connected with the word fever, must be dismissed from the mind, as before mentioned and let the simple phenomena of the febrile paroxysm be noticed and reported—chill, heat, sweat, the order of their occurrence, the locality or localities, and whatever else accompanies the febrile paroxysm.

A case reported on these lines simplifies the task of the physician greatly, facilitating references to the Repertory and enabling due distinction to be made between different remedies. No patient ever can tell the physician too much regarding his condition, and it is hoped that this article will enable patients to group their symptoms into a convenient scheme.—*The Homœopathic World*, February and March 1, 1911.

PROFESSIONAL OPPORTUNITY.

By C. E. SAWYER, M.D.

Marion, Ohio.

IN discussing the subject, professional opportunity, I wish to consider it in the sense of a convenient time, and that time not alone the present but the future as well, and my remarks will have reference especially to the homœopathic profession. Never since the time of Hahnemann has homœopathic professional opportunity been greater than now. Homœopathy is really just at the sunrise of its day. That which has already been accomplished is but a mere suggestion of following possibilities. By the time the homœopathic sun is at its meridian, if its adherents will but take advantage of its opportunities, they will have produced ideals which will be lasting triumphs of success worthy the admiration and emulation of all.

This is not the opinion of an enthusiast but the reiteration of a demonstrable fact capable of verification and substantiation by evidence too positive to be successfully rebutted. As a proof of the acclamation, and to demonstrate future possibilities, let

us for a moment consider homœopathic development, from what homœopathy has done, we may reasonably predict what it will do, for there is nothing quite so convincing as to future possibilities as past accomplishments.

The policy of the homœopathic school from its beginning, has always been the most good to the greatest number; as a result of this policy, we have the broad-minded modern homœopathic physician, liberal in his views, earnest in his convictions and just in his conclusions. He knows no restrictions, by honesty of purpose; he accepts the laws of hygiene as common laws, the findings of bacteriological research as the property of all, the principles of physical development as universal, the rights of surgical procedure in his opinion, belong to no sect, they are regarded as the outgrowth of combined efforts and experiences, and are in no way limited to schools or factions. This is also true of all the long line of adjuvants which are known to be essential to the welfare of humanity, and every physician, no matter what his school, has the right to formulate his prescriptions in accordance with the requirements of the case. Let that constitute whatever in medicine, surgery or hygiene it may.

Sometimes our professional contemporaries seek to limit homœopathy to the use of drugs alone, they would have the laity believe that when we overstep the bounds of little pills, we cease to be true to our profession, and are charged with usurping rights that do not belong to us. Fortunately the light of reason has cast its rays wide enough to show the fallacy of this position and it is now understood by everyone that homœopathy in its broadest sense stands for everything that is reasonable and just in supplying the demands of sick humanity.

When our beloved Hahnemann bequeathed to the world the law of similars, he bestowed principles broad enough to admit of the erection of a superstructure of sufficient magnitude to meet all the requirements of coming generations, and fortunately for all, the endowment contained no restrictions to development,

no limitations to improvement. The demand of the times was presumed to determine its needs, and as the changes since the birth of homœopathy have been numerous and widespread, it stands to its credit that it has been equal to all emergencies, and has increased its skill and usefulness in proportion to the necessities of the occasion.

It is also a matter of just pride to all homœopathic practitioners that their foresight anticipated the increasing demands of the modern physician, and in their improvement of educational methods, provided means complete enough for the relief of all.

A retrospective view demonstrates how great has been the force; how determined the effort in the development of the homœopathic physician of to-day.

It is true that homœopathy began as a general practitioner but yielding to the demands of the times, responding to the quick step of the progress of the world in general, it was found necessary in the proper execution of the homœopathic idea to develop the specialist, later to constitute the surgeon and finally add the bacteriologist to the list. All this has been accomplished and homœopathy is not yet finished. Modern homœopathy stands for everything progressive in the healing art, no matter what its source. This enlargement of the homœopathic field in no way interferes with the law of similars or changes the effect of its prescriptions instead of being against homœopathy or having altered homœopathic principles, this development has strengthened it and has shown its progressiveness.

It may be well here to consider the reasons for the various stages of development and the acquisitions which were made from time to time.

The real homœopath knew that the best results would come from concentration of action and therefore found excuse for the specialist. The homœopathic specialist knows that the causative factor in disease is infinitesimal in its origin. He realizes likewise that the law of cure which acts best no matter what line of cases he may be pursuing is that of similars and so

full of the power of certainty he goes forth to his field of labor with qualifications surpassed by none—his familiarity with drug-action in accordance with the homœopathic law makes him capable to meet the requirements of every emergency, for no matter what his field of activity with the law of similars to support him, he has the assurance of success and regardless of what our contemporaries may say he is none the less a homœopath, no matter what adjuvants he may employ so long as they are reasonable and just.

The homœopathic surgeon became a necessity because time demonstrated the fact that there were conditions which were not medical. The promulgation of asepsis and antiseptis demonstrated that the underlying principles of all modern surgery was after all but the carrying out of the true homœopathic principle, so the homœopath had a double reason for surgical privilege, for here again was the effect of infinitesimal influences operating to prevent the carrying out of the best means of procedure.

Since the homœopathic surgeon has been grounded in the law of dynamic effects and has learned to appreciate the knowledge of how to overcome the direful influences of microscopic organisms, I contend that he has the unquestionable right to claim for himself superior ability when he combines in his surgical work drug-action as laid down by Hahnemann: for in his ability to apply drugs in conformity to the law of similars, he has made himself more capable as a surgeon, for medicines as concomitants in the majority of surgical cases are highly essential. The knife alone is not always sufficient even in the best indicated surgical cases.

Bacteriology is only another confirmation of the underlying principle of homœopathic belief, for it affords the living evidence of dynamization and infinitesimalism and it is only reasonable and right that homœopaths above all others, should be bacteriologists. Granting that bacteriology has developed much that is new and important we are yet confronted by the fact that drugs homœopathically prescribed go on making cures regardless of microscopic findings. I am never more convinced of the

propriety of the law of dynamics as understood by homœopaths than when combating some bacteriological disturbance. It is then that I feel the assurance of some real means to the end sought. I am just as confident of the effect of the homœopathically indicated remedy when I know I have a bacterium to meet as I am from every other cause. I know that the manifestations of the different bacteria are always similar whenever found, and if the symptoms are in keeping with the microscopic findings, I am sure I shall be able to find a *similimum*.

To-day the great medical world outside the homœopathic profession is casting about for a real law of therapeutics, *similia similibus curantur* provides the opportunity for developing a universal scientific rule for the application of drugs which will be accepted by all who investigate its real principles, and if homœopaths will but take the advantage of the opportunities presented by the demands of the times, they will secure as adherents to the homœopathic law of cure, thousands who are now seeking further light.

Thanks to the energy of present powers, we are at the threshold of a new era in homœopathic *materia medica*: we are at the building of a broader and stronger foundation, and we are sure of a larger and more perfect superstructure as evidenced by the recent work of the drug proving cause. This is the beginning of a great work and should be followed with assiduity. Such facts as they have acquired will rob our *materia medica* of all mysticism, and force the acknowledgment of our contemporaries to the truthfulness of the principle for which homœopathy has so long contended.

The present is the opportunity for handing out to our confreres our latest findings, of impressing upon them that homœopathic *materia medica* is really scientific *materia medica* and by thus gaining recognition of the homœopathic law by all schools of medicine, we will find the homœopathic principle aggrandized and patronized by those who have heretofore

belittled and ignored the same. Truth will stand against obduracy and all opposition, so let us present the truth.

If such of the regular persuasion who have been inclined to scoff and jeer at homœopathic materia medica would only stop long enough to note the history and disposition of drugs they would find on every hand that nature in her creation of things had established an affinity which is nowhere more marked than in drugs and their application to disease. As illustrations let us turn our attention for a moment to bryonia. The toxic effect of bryonia invariably expends its force in parenchymatous organs enclosed in serous membranes and no matter the individual, the effect of bryonia poisoning is always manifested by pathological changes in serous membranes. Bryonia is as intimately related in its affinity for serous membranes as is the variation of color to the peacock's tail. With this as a starting point how easy it is to provide proof that bryonia in small doses will cure disturbances of serous membranes which have arisen from other causes. All that is necessary is the practical application of the homœopathic principle; it needs only to be tried to be proved. In contra-distinction to bryonia which comes from the vegetable kingdom let us for a moment discuss *cantharis*.

Every one knows that the poison of the Spanish fly has an affinity for mucous membranes and especially for the genito-urinary tract and in every instance where its toxic effect is obtained, strangury, urinary tenesmus and pain are present. Now if *cantharis* selects with such certainty particular organs of the body and if it invariably produces certain symptoms in the subject when given in toxic doses, is it unreasonable to suppose that it will benefit similar conditions in the body arising from other causes if applied in non-toxic doses? The principle of homœopathy is the most reasonable and the most sensible of any of the principles affecting human life. The application of drugs in accordance with the law of similia is nature's own law. In *belladonna*, *stramonium* and *hyoscyamus* are every indication that plants are related to each other;

that they have a specific influence upon the human body and that they are intended by every provision of nature for the cure of such conditions as they produce.

Thus we might go on with every drug with which we are familiar and we could find with as much justification a rule for the employment of any of them, for each one has some underlying rule of application which indicates it in every case. How much better is it to have some reasonable rule of application, some real point to aim at and some certainty of success rather than the empirical method and "shot gun" policy of polypharmacy.

If we as homœopaths will study more carefully the pathogenesis of drugs, if we will learn to depend upon the real pathological effect of medicines and the kind of organs in which they are indicated, we will have established for homœopathy a policy which cannot be gainsaid by anyone. One of our greatest troubles in the past has been that sometimes our enthusiasm has gotten the better of our judgment and we have made statements and laid claims that were doubtful if not questionable. But with all shortcomings, the homœopathic principle has kept in the vanguard and if proper tactics are employed by the homœopaths of the future, recognition will be universal.

It is recognized by all that homœopaths have revolutionized the dispensing of drugs. The American Institute of Homœopathy set the pace for medical education and the homœopathic practitioners of days gone by created a new life and greater longevity for the children of the race, for they taught long before the microscope made its revelations that disease producing force was an unseen and dynamic force, and that filth, foul air and lack of sunshine were productive of much of the mortality rate among children, and it was through their efforts that sunshine and fresh air were let in and filth and stench let out. Because of their results in preventing and overcoming children's diseases, they used to be called baby doctors, they were said to be good enough for the children.

It has finally come to pass that these children have become

adults and these adults have not forgotten what medical principle made their early existence possible or their afterliving endurable. So now the homœopathic clientele numbers thousands of the best full grown citizens of the land and each year finds new exponents of its truth and many new beneficiaries of its practice, and the principle promulgated and carried forward by the forefathers in the faith, has continued to grow until even our former enemies have admitted that homœopaths are not more than half bad and so they are willing that we should join the regular medical family.

It has been this progressive disposition, this realization of facts and principles, this application of means and methods that has made homœopathy such a power in the medical world and it is because of the ever increasing field of homœopathy that amalgamation is so desired, to make the most of our opportunities.

We must arrange for still broader preparation, greater thoroughness of research, and a firmer stand for our principle and when we have succeeded in this we will have attained just recognition.

I believe that there should be but one doctor of medicine, that there should be but one school, but the *Materia Medica* of that school should be based upon the law, *Similia Similibus Curantur* and its progenitor and followers should be recognised as worthy and capable men and women to both glorification and recommendation.—*The North American Journal of Homœopathy*, January, 1911.

EDITOR'S NOTES.

An Ever-Ready Night Light.

An ever-ready night light, according to *The Trained Nurse*, can be made from a bottle about six inches high and one inch in diameter, by filling it two thirds full of pure olive oil, which has been heated well for about fifteen minutes, and dropping in a piece of phosphorus about the size of a bean and corking tightly. This is said to give a good light for about four months, and whenever it grows dim, the bottle is opened to let in oxygen. Care must be used in handling the phosphorus.—*The North American Journal of Homœopathy*, January, 1911.

Drying the Milk Secretion.

Storrs in the *Jour. of Surgery, Gynecology and Obstetrics* gives the method which is used in the John Hopkins Hospital in all cases for checking the secretion of the lactating breast. If nursing be contra-indicated for any reason, the breasts are left absolutely alone for the days immediately following labor. When they become painful from the engorgement that usually comes about the third day, the patient is told that the pain and swelling will disappear and that no treatment is necessary. If the pain becomes so severe that the patient seems unable to stand it, a hypodermic of morphine or codeine may be given. A loose fitting bandage may be applied to prevent sagging, but not to exert pressure. This method has been thoroughly tested during the past four years and has been found satisfactory and enables the abandonment of the breast pump, plasters and tight bandages. It checked the secretion in all cases and in no instance did a mammary abscess develop.—*The North American Journal of Homœopathy*, January, 1911.

Autogenous Virus in the Treatment of Sepsis.

The latest development of vaccine therapy comes from our American colleague, Dr. Duncan, who has recorded some striking cases of Sepsis treated and cured in a new way. In one case of abscess after compound fracture with marked septic symptoms, after the failure of a stock vaccine of streptococcus pyogenes and also of an autogenous vaccine, three doses each of one drop of the fresh pus were given by the mouth in sugar. There was a marked reaction

to the third dose, but subsequently the effect on the pus secretion was marvellous. In a few days the wound was healthy, and the discharge had stopped. After this experience, Dr. Duncan made use of a similar method in other septic cases, with similar excellent results. Two or three doses only were given in each case. This is a development of Isotherapy without potentization. Ten cases in all were reported. The paper and discussion on it will be found in the *Chironian*.—The *Homœopathic World*, January 2, 1911.

Equisetum.

Dr. Simpson writes:—"Equisetum Hyemale" in involuntary urination I have often found of great value, and the most recent clinical confirmation came under observation recently, as follows in the person of a Mrs. P n, aged 35, who complained of being very frequently compelled to forego important duties and diversions for fear of the urgent sudden desire to urinate, the urine escaping involuntarily unless promptly arrested with difficulty and pain. Over the region of the bladder a dull pain was mostly present, aggravated by standing, walking or kneeling, I suspected some "anteversio uteri," but finding no indication of malposition, prescribed three drops (of the sixth centesimal) of *Tinct. Equisetum Hyemale* twice a day until relieved. She only required two doses to effect the purpose, and since January has been entirely free from discomfort.—The *Homœopathic World*, January 2, 1911.

Infantile Scurvy.

Ostheimer in the *N. Y. Medical Journal* says that while the exact cause of infantile scurvy is still shrouded in doubt, yet the treatment is extremely simple for the administration of fruit juices, especially orange juice is almost specific. In many instances no other treatment than the administration of orange juice has been employed and rapid recovery has resulted. Yet most physicians agree that, as infants in whom infantile scurvy develops have generally been taking some proprietary food, condensed milk, or sterilized milk, this food should be at once stopped, substituting for it uncooked milk, or milk that has been boiled just before giving it to the child. As a prophylactic measure, orange juice should always be given to infants who have been fed on such foods for any length of time. Of course these infants should be placed upon an uncooked milk

mixture at once. The prognosis is always good if the diagnosis be made early and proper treatment given. Orange juice is the best of the fruit juices and should be given in doses of one tablespoonful or more every two hours. Grape juice comes next. Lemon juice must be sweetened and is not so good as unsweetened juices. In a word: the treatment of infantile scurvy is orange juice.—*The North American Journal of Homœopathy*, January, 1911.

Treatment of Syphilis without Drugs.

Kern in *Physiologic Therapeutics* claims to have had more satisfactory results from the treatment of syphilis without drugs than with any of the wellknown methods usually employed. The outline of the treatment which is used, and which is irrespective of the stage of the disease, is as follows: Each patient receives a course of twenty-one sweat baths in a hot-air oven. These baths are given daily and patient is left in the bath until the bodily temperature has reached 100 degrees F, after which he is placed under a needle shower at 100 degrees and left for three to five minutes. The temperature is then gradually cooled to 60 degrees and kept at that temperature for twenty to sixty seconds. After drying, the patient rests for a short time before leaving the office. In addition the patient takes nascent ozone inhalations (oxogoline treatments) for forty-five minutes morning and evening. Should the patient show any loss of weight, the length of treatment is reduced to thirty minutes at a sitting until he gains again, when the length is increased to forty-five minutes as before. After six weeks of this treatment the inhalations are reduced to one a day and this is kept up for six or seven months. Medication of any kind was never resorted to, irrespective of the condition of the patient, and all the usual syphilitic eruptions have disappeared in from two to four weeks after beginning treatment. The advantages are summarized: The method is clean and far from disagreeable. Instead of burdening the patient with a poison, the appetite improves and the weight increases, it builds up their vital resistance. There are no inconveniences to fear from possible over-dosage. The length of time required for a cure is shorter than with the routine mercury-potassium-iodide in general use to-day.—*The North American Journal of Homœopathy*, January, 1911.

Evolution of Medical Terms.

It is axiomatic to state that the more profound our knowledge becomes the more confined are the uses of our words. When a generality is dissected into numerous parts, we must have terms to express the meaning of the divisions. Venereal diseases had to be separated into gonorrhoea and syphilis; typhus fever into typhoid and typhus; and at the present day many of our class-names are being thrown from a position of specificity to one of obscurity. The *febriculae* of diagnoses of not many years ago are coming into their own as influenzal, pneumococcal, septicemias, through the influence of more careful bacteriological routine, or as one of a group like that described by Brill on the basis of most careful clinical observation. The white-cells of the blood form a whirl of polemic discussion based mainly on studies of histogenesis, and what is a myeloblast to-day becomes a lymphoblast to-morrow. Acute lymphatic leukemia is in grave danger of losing its respected position in the world of medical terminology, for after all, are not the large cells really myelogenous in origin? Raynaud's disease will probably ultimately be called by some other name, not as a concession to those who see no reason for attaching a man's name to things medical, but because as a clinico-pathological entity it will not be able to withstand the onslaughts of those who believe it to be merely a state of affairs existing at some particular time in the life of an unknown disease, whose ages at other periods are represented in erythromelalgia, acrocyanosis chronica anæsthetica, thrombo-angiitis obliterans, etc. Diabetes mellitus undoubtedly is a cloak to cover more than one disease whose main clinical manifestations are similar. Clinical observation has already divided this symptom complex; further studies in conjunction with pathologists will surely make a more permanent classification when one begins to consider our present knowledge of diseases of the liver and spleen and remembers Hanot, Gaucher, Widal, Banti, in a confused medley with splenic anemia, hereditary acholuric jaundice, and hypertrophic cirrhosis. We can only hope for a future when definitions of diseases will be complete, and when the names applied will be based on clinico-pathological grounds rather than applied as an honor to the discoverer. —The *Journal of the American Institute of Homœopathy*, January, 1911.

Campaign against Certain Patent Medicines.

The main effect brought about by the policy of the Bureau of Chemistry has been to educate the public to a sense of the harmfulness of many of the patent medicines. For instance, Dr. L. F. Kebler, chief of the Division of Drugs of the Bureau of Chemistry, published a short time ago a pamphlet pointing out the harmfulness of many of the habit-forming drugs which are contained in so many of the most widely advertised nostrums. He was especially insistent on the fact that the majority of the so-called soothing syrups for infants had in their composition narcotics of one kind or another, especially opium and its derivatives. These soothing syrups are extremely commonly used in America, and Dr. Kebler made out a list of the more prominent ones which contain habit-forming drugs. Of course, a great difficulty met with in America in the endeavour by the authorities to prove to the public that many nostrums are harmful to health is that the lay journals advertise them extensively. The same difficulty is doubtless met with in Great Britain. Wonderful to relate during the summer of last year an influential daily paper in Philadelphia took the matter up, quoted Dr. Kebler as to the composition of several of the more notorious infant soothing syrups, and initiated a newspaper campaign against the use of these remedies. Further than this, the most conspicuous daily paper of Chicago followed suit and pursued a campaign against babies' soothing syrups with typical western energy. The writers of the articles did not mince words in describing the action of the manufacturers of such products, but vituperated all concerned in the traffic in strenuous western style. Cartoons, too, were brought into use to illustrate more graphically the effect of the syrups, and at the Food Exhibition held in Madison-square Gardens, New York, a few months ago, Dr. Kebler used one of these cartoons on a screen as a part of the Bureau of Chemistry's exhibit to educate the public regarding harmful nostrums generally. Newspapers in different portions of America have interested themselves in the matter to a greater or less extent, and thus the community is beginning to have an intelligent comprehension of the fact of the case.

Moreover, the United States Post office Department is coöperating with the Division of Drugs. This division in 1909 made analyses of 15 medicinal agents represented as cures for various maladies and sent or prescribed through the post in violation of the postal

laws. The investigations required not only the analysis of the samples of the medicines used in the treatments, but also a study of all the claims and representations made for treatment, that the Postmaster-General might be advised as to whether or not false and fraudulent representations and promises had been made. In 1909 and during the past year several successful prosecutions have been brought by the Post-office Department against nostrum proprietors for violations of the postal laws.

It is impossible to over-estimate the educative influence of the various pamphlets sent out by the Division of Drugs, describing the composition and explaining the injurious nature of many of the well-known quack remedies. It is in this educative propaganda that the utility of the work being done by the Division of Drugs is mainly to be found. Some little time ago Dr. Kebler, Dr. Morgan, and Dr. Rupp, all connected with the Bureau of Chemistry published a bulletin on the harmfulness of headache powders. These powders are very largely used in America, especially by women, and are no doubt also used on a wide scale in England. It was first shown that acetanilid, antipyrin, and phenacetin are very frequently made use of in the preparation of mixtures intended for the relief of headache and other minor aches and pains; it was likewise shown that the injudicious use of these drugs has produced bad effects in many instances; and furthermore that the number of reported cases of poisoning by at least one of them has increased notably during the past few years. A list was compiled of the authentic cases of poisoning by these drugs, and this plainly proved that headache powders sold indiscriminately are a distinct menace to the public health.—*The Lancet*, January 14, 1911.

CLINICAL RECORD.

Foreign.

CASES CURED BY HOMŒOPATHIC
TREATMENT.

BY JAMES TYLER KENT, M.D.

CASE I.—Miss H., age 29. While attending school broke down in health from over work. This state of nervous prostration and brainfag had lasted four years.

Study was impossible, as it produced trembling and congestive headaches. She became violently excited from even short conversation with friends.

The only thing possible for her to do was light house work.

There was aversion to all food, but especially to meat, potatoes and bread; no thirst; light coloured stool; likes cool better than warm air; sleepless; suffered occasionally from occipital headaches; rheumatic pains in left shoulder; she suffered much from sciatica.

Lecithin, 1m., two doses, five weeks apart, and then two doses, 10m. far apart, cured her entirely.

She has since finished her university course and taken her degree.

CASE II.—Miss B., age 27. Had suffered great tortures with sciatica. Pain low down in back and sciatica on right side; severe in hollow of knee; constantly taking cold.

Lumbar region feels so weak.

Pain in hypogastrium first day of menses; menstrual flow only three days and clotted.

Tired all the time, wants to rest but cannot.

Has been operated on for appendicitis.

When walking, feels that she must pull the right leg forward to make it go.

Cannot lie on the back as it increases the sacral pain; numbness when lying on this painful right leg; distress in the right sciatic when lying on it.

Exertion brings on pain in the sciatic; pain in the right sciatic during menses; pains are worse during rest.

She got *Rhus tox.*, 12m. April 10th; also May 1st and 16th. The first powder relieved the pain in three days and when it

returned the remedy was repeated. No pain and good health after the third dose. She had taken old-school treatment and osteopathy for two years, during which time she had steadily grown worse.

CASE III.—Mr. C., age 54. Passes blood with nearly every stool; has no hæmorrhoids nor any other trouble with anus; what he calls a "twisting" pain in abdomen followed by stool; many loose stools. Has had several attacks similar to that for which he now consults me. He is a carpenter and while at work may be taken with hasty call for stool and manages to reach the closet, but fails to remove or lower his garments, and the first thing he knows returns to consciousness to find has passed stool and urine in clothing.

Says he is generally unconscious about thirty minutes; has no knowledge beyond moment of reaching the closet.

Seizure begins with the "twisting pain" in the abdomen; the stool is copious and partly formed; next stool is generally normal.

Sulphur 10m., and he reports that he is in better general health than for twelve years; has never had recurrence. The prescription was made June 29th, 1907.—The *Homœopathic World*, January 2, 1911.

APPENDICITIS.

BY FRANCIS J. WHEELER, M.R.C.S., L.R.C.P.

A. R. 27, Female (single), dressmaker.

Previous health good until two years ago. She then commenced to have severe attacks of pain in right side of abdomen. She was treated as an out-patient at local infirmary, where the case was said to have been diagnosed as *chronic appendicitis*, and an operation suggested. Patient refused it. For two years she has had these severe attacks of pain every fourteen to twenty-one days.

Notes of case.—Pain right iliac and right lumbar regions. Usually <afternoon 2.30 to 3, dull aching and accompanied by vomiting and > after vomiting. Vomits like sour water, yellowish in colour.

Pain <before menses. Pain is so severe she must lie down, and cannot lift up her right leg. Right sided headache, and pain over right eye at times <a.m.

Food—Aversion to fat well marked; likes hot foods yet > cold food; feels < after eating.

Bowels always constipated. Feels very depressed and "inclined to cry for nothing." Generally > open air < warm room < menses.

Treatment.—*Puls.* 10m. one dose.

Result.—Slight attack two days after *Puls.*, but *unaccompanied* by vomiting. At the time of writing two M.P. have passed and both marked by complete absence of pain, and no pain between peridos. The patient has lost her depression and says she "feels better altogether."—The *Homœopathic World*, January 2, 1911.

A CASE OF TUBERCULOSIS OF THE CONJUNCTIVA.

By C. KNOX SHAW.

Ophthalmic Surgeon, London Homœopathic Hospital.

Miss Edith H., age 27, was sent by Dr. Goldsbrough to the London Homœopathic Hospital on September 16, 1909. When she was 4 years old her father died of phthisis. She is the second child of her parents, her elder brother dying at 9 months from tuberculous meningitis. Her eyes were first affected when she was 2 months old. At the age of 3 they were again bad, and after a year's treatment she was admitted to Moorfields. She was an in- and out-patient there several times till she was 12 years of age. Up till 18 years she remained fairly well, with only slight attacks. During the last eight years she has been constantly under treatment, first as an in- and out-patient at St. Thomas's Hospital, and later as an in-patient for five months (November, 1908, to March, 1909) at the Royal Westminster Ophthalmic Hospital. The following five months she was a patient at the Royal Sea Nita Bhg Infirmary, Margate. Whilst at the Royal Westminster Ophthalmic Hospital she had seven injections of tuberculin in her right iliac region, and one subconjunctivally. Her last injection was in February, 1909. All treatment seems to have been of no avail, and the patient was unable to do any work. Her mother now consulted Dr. Goldsbrough, who sent her to the London Homœopathic Hospital. In addition to her ocular condition, Miss H. had suffered from obstinate ulcers on her legs when a girl, and her feet were always cold, like marble.

There was nothing characteristic about her appearance. Her right cornea was faintly nebulous, but otherwise the right eye was

good. On the left cornea was a dense nebula. At the sclero-corneal margin, on the outer side, was a yellowish-red subconjunctival nodular mass, infiltrating the conjunctiva, and raised above the surface of the sclerotic. There was considerable ocular injection, pain, and photophobia. Around the mass the sclerotic was blue and discoloured. The surface of the nodular mass seemed ulcerated. She was prescribed tablets of calc. carb. 3 t.d.s., and m iii. of tuberculinum 30 once a week, and told to come again in a month's time.

She, however, returned on September 20, saying she began at once to improve on taking the calc. carb., but after taking the tuberculinum on the 19th she had severe pain in the eye, with increase of photophobia swelling of the lids, and a great increase in the redness and injection of the eyeball. Owing to this aggravation, all medicine was stopped. By the 25th the eyes were much better, the injection had gone, and there was no pain. Sac.lac. ordered night and morning.

September 30.—She has been steadily improving until to-day, when the eye became inflamed and painful; before this the left eyeball had become clearer, and there was very little redness. T. n., extensive ciliary injection, but the raised nodular mass is certainly less. Calcareo carb. 3 at night. Tuberc. 30 once a week, and gutt. atrop. t.d.s.

October 21.—She has taken her medicine steadily; the tuberculinum now produces scarcely any reaction; and the patient is feeling ever so much better in herself. Her eye has not been so well for two years. The nodular mass described in the first note has gone; the eye is less red, and there is very little ciliary injection. Has omitted atropine three days. Repeat med. only.

November 4.—Steady improvement; the corneal opacities are decidedly decreasing. Repeat tuberc. only.

November 11.—The day after taking last dose of tuberc. considerable reaction. Calc carb. 3 nocte. Tuberc. once a month.

December 9.—Took tuberc. on December 6, the first time since last note; the eye having been quite free from bloodshot. Next day the eye was red and inflamed, but this has passed off. Repeat.

January 13, 1910.—The dose of tuberc. taken last night was not followed by any reaction.

February 17.—Is feeling very well in herself, better than she has been for the last three years. Has had no redness of the eye during the month, no reaction. All induration has subsided; the sclerotic has resumed its normal appearance, but the veins are a little full. The nebulæ are less marked.

She now ceased attendance, and went to Biarritz as a governess. In answer to an inquiry (December, 1910), her mother writes that she is continuing her work, and "that the eye is beautifully clear." She still takes an occasional dose of tuberc.

This case seems worthy of report on grounds other than the relief of such a long-standing disease, which is in itself a point of interest. Here tuberc. 30, taken by the mouth, cured after tuberculin, given subcutaneously and subconjunctivally, failed to produce any amelioration. It is to be noted what a decided aggravation the first dose of tuberc. produced, and how the reaction became less and less as the case progressed.—The *British Homœopathic Journal*, February, 1911.

THUJA IN THE CURE OF WARTS.

BY JAMES SEARSON, M.D.

On September 22nd of this year a youth, aged 19, came to consult me at the London Homœopathic Hospital. The back of his hands were practically covered with warts. I counted fifty of them altogether. He had had them for three years, and fresh ones were coming. They were chiefly situated about the knuckles and the tips of the fingers, and they were worse on the right hand. He had some time previously applied *Sulphuric* and *Glacial Acetic Acid*, acting under medical advice, and the warts disappeared under this local treatment but re-appeared again three months afterwards, rather worse than before. I gave him *Thuja* 30 five drops night and morning. I saw him again on October 13th. He thought one of the warts appeared to be powdering, but otherwise there was no change. I gave him *Thuja* 3x, three drops thrice daily. On the 10th of November I saw him again. Some had gone, others were fading and no fresh ones had appeared. I gave him *Thuja C.M.*, three doses, to be taken at intervals, and I had the satisfaction of showing the case at the Honyman-Gillespie Lecture on December 6th. The warts had altogether gone, and the hands were quite clear. While he was under my treatment the patient had no local application of any kind.—*The Homœopathic World*, January 2, 1911.

TUBERCULOSIS.

BY FRANCIS J. WHEELER, M.R.C.S., L.R.C.P.

CASE 1.—G. D., aged 2 years, Female.

Family History.—Consumptive. The mother was in advanced stage of consumption before the birth of the child and died soon after.

Notes of Case.—The child had been delicate from birth. Last April had pneumonia. It had recently been operated upon for abscess over right malar bone (? tubercular).

The patient was first seen by me on August 17th, 1910. It was a fat, flabby, fair-haired child. Its appearance was striking. While apparently well nourished its flesh had a peculiar chalky-white appearance. The lips, conjunctivæ, and mucous membrane of mouth appeared almost colourless, being so anæmic. Anterior

fontanelle not closed. Abdomen swollen. No enlarged mesenteric glands could be felt. Left big toe swollen. Right ankle swollen and skin inflamed over Int. Malleolus, obviously tubercular.

Right leg weak. Walked with limp and foot thrown outwards. Adductor muscles of thigh wasted due apparently to anterior poliomyelitis. Sweats on head at night. Appetite bad. Extremely fond of eggs.

Bowels.—Recently had suffered from Diarrhœa of greenish colour.

Teeth.—Number of erupted teeth not noted at the time. The two upper canines were just becoming visible but black and unhealthy looking.

To sum up the child was clinically typically tubercular, and definitely a *Calcarea Carb.* patient.

Treatment.—*Calc. Carb.* 10m. one dose, with an occasional dose of *Tub.* 30.

September 14th.—Nearly a month later. Right ankle less swollen. Left toe apparently normal. Much $>$ until three days previously, when it had diarrhœa. Lips slightly more colour. Canine teeth nearly through, and *sound tooth beyond the black edge* (*vide* Kent under *Calc. Carb.*). Walks better. *C. Carb.* 10m. repeated as child was not so well in itself, fretful, etc.

October 14th.—Improved wonderfully. Flesh more natural in appearance. Eats and sleeps better. Swelling of ankle cleared up by the end of September; no return since. Right leg not so weak. Lips good colour and cheeks show trace of colour. Anterior fontanelle smaller. *Calc. Carb.* 10m. given.

December 1st.—I have not seen the child since October but received a letter to say the child "looks wonderful," is eating well and its cheeks are "getting quite rosy." A written account is inadequate in conveying how very bad the child was and the marked improvement which has taken place. It has had no more medicine since October. The *Tuberculinum* was probably unnecessary, not being indicated by the symptoms.—*The Homœopathic World*, January 2, 1911.

Gleanings from Contemporary Literature.

"IONS," THE SECRETS OF THE PAST, THE HOPES OF THE FUTURE.

By CHARLES W. HAYWARD.

*Surgeon, and Surgeon to the Throat, Nose and Ear Department,
Hahnemann Hospital, Liverpool.*

"IONS!" What are they? What do they teach us? What do they promise us?

I regret extremely that I can put forward no claim to long acquaintance, or special knowledge of these, the latest and by far the most wonderful of the recent discoveries of science. I have read one or two books describing them and their conduct, and the tale is one which dwarfs any romance, I care not who may be the writer. It tells of wonders beside which the most wonderful and uncanny fairy tale is insipid and colourless. It has opened up a new universe of interest to me, and I trust that, as I pass in review a few of the points which stand out in my recollection, your interest will be sufficiently excited to overlook the demerits of a condensed and otherwise mutilated story. When I come to the few remarks at the end of my paper, which deal with the application of these ions to the cure of disease, I shall be able to give one or two observations of my own, culled from a short and limited experience of cases under my own care; but apart from these fragmentary accounts, I can only dish up scraps from the masters' tables, hoping that the resulting hash may be palatable enough to whet your appetites for further helpings of the same mental pabulum.

Firstly, allow me to give baldly four chemical definitions, which will be in complete agreement with the knowledge taught even so recently as when the youngest of us attended college.

(1) A "molecule" is the smallest particle of a substance that can exist in a free state, and which has the same composition as any larger mass of the substance.

(2) An "atom" is the smallest part of an element that exists in any molecule.

(3) A "compound" is a substance whose molecule contains two or more kinds of atoms.

(4) An "element" is a substance whose molecule contains only one kind of atom.

These definitions, with which we, in common with all other scientific men, have grown up, are so firmly rooted in our minds that they seem almost to partake of the nature of "self-evident truths." Until recently they were accepted as such, but the discovery of the "ion" has blown them into fragments. You will observe that the "ground fact" of them

is the "atom." Destroy this, and the rest tumble. The first announcement made by the newly arrived ion is, that the "atom," far from being the smallest imaginable entity, is so huge by comparison, that an ion has about as much freedom and space within it, in which to whirl around at inconceivable speed, as our earth has in which to describe its orbit in the solar system !

Before describing any experiments, I should like to premise that my paper will be largely composed of quotations, and that I lay claim to no originality, except arrangement of these quotations with padding. It will be safe if you bear in mind that all the interest and the facts in the paper are borrowed, and that all the sawdust and padding are my own. To commence this mixture, I may ask how were these ions discovered, and how may we follow their demonstration ?

Gases have in the ordinary course a very faint power of conducting electricity, and so it was possible to charge an electroscope and to maintain the charge for some time, as leakage was slow. I do not apologize for saying that an "electroscope" consists of an insulated rod to which are attached a brass plate and a thin strip of gold leaf. When the rod is electrified, the repulsive force between the portions of the same charges of electricity on the plate and the leaf, causes the gold leaf to stand out at an angle from the plate, which angle is a measure of the amount of electrification.

Now the electroscope, having been charged, leakage is slow, and the repulsive angle is maintained for a considerable time, but it was found that if air from a candle flame, or air through which electricity had been passed, was brought near the instrument, the leaf immediately collapsed, showing that this air had in some mysterious way been rendered a good conductor of electricity.

If we seek explanation from the chemist, he can only say that this air merely contains water and carbonic acid, and if you reply that it also contains "conductivity," he will reply that your explanation is simply ridiculous, as "conductivity is a condition, not a thing." But on further experiment, we find that if this air is filtered through glass wool, or bubbled through water or passed through a space through which a current of electricity is passing, all this new "conductivity" is removed. This power therefore depends upon something which can be filtered out ; it must consist of particles, which must be different from the original particles of the gas in the normal state, and as the power is destroyed by an electric field, they must be electric particles, and as the conducting gas as a whole shows no change, they must be both positive and negative ! These particles are the "ions," and the gas has been made into a conductor by "ionization."

Diagram No. 3 (exhibited) confirms the statements here made, by showing the flame of a Bunsen burner, divided into two parts, one positively and the other negatively electrified, simply by placing it between two oppositely charged plates.

A further experiment gives extended information. In diagram 4 is shown a glass vessel containing an insulated metal plate (A), connected to an electrometer, while under the plate passes a wire which can be rendered incandescent. With normal pressure of the air in the vessel, as the wire becomes hot and glows, the metal plate receives a charge of positive electricity. After passing a yellow heat, this charge diminishes rapidly, and at a bright heat is very small. So far we prove that gaseous ions pass from the hot wire to the plate, and that these do not necessarily convey both kinds of electricity, but only positive. Now pump out air from the vessel. At first there is little change, but as the air pressure lessens, the sign of the electricity changes, and it becomes negative, and when nearly all the air is removed, this may be of a high value. We therefore, gather that a low temperature and high pressure favour positive ions, and that as the temperature rises, or the pressure falls, negative ions are also freed, which neutralize the positive reaction, and that with a high temperature and low pressure the negative ions swamp the positive. These negative ions are known as "corpuscles." Now, these "corpuscles" might be aptly termed "unbelievable truths," as their size destroys all our conceptions of dimensions; their rate of motion breaks up our conceptions of speed; their universality banishes our idea of space; their energy transcends any fancy multiple of our most powerful machines which we can figure out, and their total combinations and powers completely knock the bottom out of our laboriously concocted scheme of the Universe, and we have in a truly literal sense given us a "new heaven and a new earth."

I have neither time nor competence to explain all the grounds which warrant such assertions, but before giving you mathematical statements embodying the truths upon which they are made, it will be well to call your attention to one interesting experiment (diagram 5, exhibited) and the fascinating cleverness of this will, I expect, banish your doubts as to the possibility of the investigator's ability to obtain the knowledge. This apparatus enables the motion and charge on the corpuscles to be determined as they fly off a metal plate under the incidence of ultra-violet light. Now for a long quotation:—

"A is a charged aluminium plate on which the ultraviolet light shines; this light comes from a spark between zinc terminals connected with an induction coil, and enters the tube through the quartz window B, which is peculiarly transparent to ultra-violet waves. E is another metal electrode, perforated in the middle. It shields the right-hand part of the apparatus from the electrified plate A, and provides a window through which the corpuscles may fly into the right-hand chamber. D and C are little metallic plates that can be connected with an electrometer. All this apparatus is enclosed in a sealed glass vessel from which the air has been almost altogether exhausted by pumping. On sending the ultra-violet light through the quartz window B, so that it falls on the charged aluminium plate A, corpuscles fly off from A,

at right angles to it, and, passing in a beam through the window of the screen E, they strike the metal plate D, give up their electricity to it and signify their presence in the electrometer in connection with it.

"So far so good. But how does this help us to the weight and velocity of the corpuscles? Let us see. The first thing we notice is that while the electrometer, or measurer of electrification, connected with the plate D, is charged on the impact of the corpuscles, the electrometer connected with the plate C is quite unaffected. This shows that the corpuscles tend to travel in straight lines. The next thing to be noticed is that on the approach of a magnet the corpuscles may be deflected so that they fall on C, and its electrometer will show a corresponding deflection.

"This fact—namely, that a magnetic force will bend a beam of corpuscles—solves our problem. It may be shown beyond all question that when a magnet is presented at a stream of corpuscles each corpuscle tends to describe a circle at right angles to the magnetic force, and furthermore that the radius of this circle equals $\frac{MV}{EH}$, where M is the mass of the corpuscle, V its velocity, E its electrical charge, and H the amount of magnetic force. Returning to the diagram of the apparatus, you will find that it is possible to measure the radius of this circle of corpuscular motion; for, when the magnetic force just sufficient to deflect the corpuscles wholly to the electrode C they travel from E to C along the arc of this very circle. The size of the circle is indicated in the diagram, and the length of its radius is fixed by the relative positions of E and C."

It is easy to measure the amount of magnetic force necessary, and taking these known quantities and substituting them for their symbols in the usual mathematical equations, the experimenters have been able to arrive at definite statements which command our acceptance, no matter how they may blow into smithereens all our preconceived notions of size, velocity, energy, or space.

In regard to size it is proved that the smallest atom hitherto known—namely, the atom of hydrogen—is one thousand times greater than a corpuscle. I should like to mention here that these corpuscles, or negative ions, differ widely from the positive ions, as a positive ion is about the size of the atom of hydrogen.

As regards speed of the corpuscles. This depends upon the electrical force with which they are charged, but it varies between 10,000 and 90,000 miles per second, the average of these equalling 40,000 times the speed of a rifle bullet. That is rather a staggerer for slow-going people; but they will have to quicken their ideas of speed, as the corpuscle will not reduce its speed limit to suit old-time notions.

These wonders of the corpuscles may be looked upon as making up the first act in the wonderful drama they perform. But the succeeding acts contain situations and excitements even more entrancing.

It was found that when these corpuscles were given off from a plate in a glass tube from which the air had been carefully removed, they flew across the tube, and bombarded the wall opposite, and it was found that they caused a set of "rays" to be formed outside the tube, and these rays were not either positive or negative ions. They had the power of illuminating a phosphorescent screen, and affecting a photographic plate, and were able to penetrate substances regarded as quite opaque to ordinary light. Their nature was not, and is not, known, and so they were, and are, called X-rays, to signify an unknown quantity. So we see that our friends the corpuscles produce a form of ray of enormous possibilities, in a manner which has so far baffled all scientists.

Becquerel found that an accidental leaving of some uranium on a photographic plate, enveloped in black paper, caused the plate to be so affected as to produce a photograph of the uranium. Here were more unknown rays!

Similar, but more powerful rays of an identical nature were later on discovered to proceed from radium. What was their nature? Becquerel found that they proceeded in straight lines, and did not affect a photographic plate not in their line of fire. But by ingeniously placing a plate out of their direction, and causing the rays to pass through a magnetic field, he found that he could bend rays round a corner and cause them to affect such a plate. This proved that the rays could be bent by a magnet.

Further investigations showed that he had here really three distinct kinds of rays:—

(1) Rays that have very little penetrative power, and are only slightly bent by the strongest magnetic forces obtainable. These rays are known as the Alpha rays. They are positively electrified ions, and travel at the rate of 20,000 miles a second, which equals 40,000 times faster than a rifle bullet.

(2) Rays that are very penetrating in character and are easily bent by weak magnetic forces in a direction opposite to that of the Alpha rays. These rays are the Beta rays, and are our friends the negative ions or corpuscles, and they travel at 100,000 miles a second.

(3) Rays that are absolutely undeviable by the strongest magnetic force obtainable, and have an unexampled power of penetrating matter generally considered opaque. These are the Gamma rays. They are neutral electrically, and will penetrate a solid foot of iron, or several inches of metallic lead. They will affect a photographic plate, and are either X-rays or some type of X-ray, and probably not any form of particle, but some vibratory waves, and it is to these rays that the effects of radium as used in treatment are due.

I cannot follow out the marvellous radium emanation but it is interesting to note that the activity shown so clearly by radium is supposed to exist in some quantity everywhere, and it suggests itself to me, that

the undoubted power possessed by our preparations of drugs which are far beyond all chemical analysis, may be in some way accounted for by this inert radio-activity being liberated and rendered available by the dilution and reduction of the atomic structure of the drug. That chemists have failed to find anything in some of the dilute preparations means nothing. They only possess comparatively clumsy apparatus. Can they analyse the sun? Yes, the spectroscope has done this and proved to us the existence of our elements in sun and stars. Physicists thought they possessed transcendental methods when they applied the spectroscope. But the spectroscope is hopelessly beaten, and all this wonderful realm of knowledge would have been still beyond our ken, and both chemists and physicists would have stoutly denied its existence, as it was beyond their spectroscope. But it was discovered that an electroscope was so much more delicate as to render it as much finer than a spectroscope as a hair is than a ship's cable.

The electrometer will discover the millionth of a millionth of a milligramme of radium—a quantity which, if told to a comparatively modern analytical chemist, would give him a headache, and if he were compelled to try and form a definite conception of it, would produce a true attack of hysteria. Corpuscles are so minute that 30,000 billions of them could find ample room in the space of a moderate-sized pin's head (or a cubic millimetre). Thousands of millions of them are contained in a microscopic blood-cell. But the real climax of the drama is yet to come, and if I seem to fly off the track of the narrative, you must excuse me, as I think the appreciation of the *dénouement* would be greater if it approached in a cat-like manner, and not in a straight line avowing its "where and whither."

The chemistry, which we all laboriously learned either from lectures or so-called "experiments," which we ourselves indifferently performed, or encouraged our neighbour to perform while we watched, that is—if any strong acid or evil-smelling constituent was necessary—has been so worried and tattered by the newest discoveries, that it more resembles a scrapheap than a science. We still recognize our seventy odd elements, and the same alluring changes take place, with the formation of the same brilliant colours or messy precipitates as we valued of yore; but what of the old glory is left, when we know that all our old friends, the elements, are no longer separate entities, but only different compilations of only one mysterious component?

I must present the rest of the drama in the form of a "potted play," or the audience is likely to melt away, as one by one creeps homeward to bed.

The spectroscope analyses the sun, and shows us all our elements there. But not as we know them; they are in vapour, and, as in iron, where "we are not dealing with iron itself, but with primitive forms of matter contained in iron, which are capable of withstanding the high temperature of the sun after the iron as such has been broken up."

But the sun, is a comparatively inefficient furnace, and Sir Norman Lockyer has found stars of progressively increasing heat, up to 30,000° C.!

Analysing these stars, he finds that in each successive hotter star, or class of stars the complicated elements are resolved into simpler forms. He classified these stars into three classes : firstly, and of lowest temperature, the carbon stars, from which faint arc lines are obtained. The metallic stars, through the ascending members of which a feeble gas of the helium family makes its appearance ; and then the hottest or gaseous stars, in which is found a strong gas of the helium family. And so this grand knowledge tells us that all elements are one element, that according to the grouping of the constituents so are the "properties of each element, that the farthest traceable particles are our old friends the "ions," now dignified with a new title of "electrons."

That one thousand negative ions, surrounded by a larger positive ion, constitute an "atom" of hydrogen. That sixteen thousand ions grouped in a positive ion are an atom of oxygen. That all the most complicated elements and compounds are made up of ions grouped in an infinite variety of numbers and manners. Finally, that these ions are really electricity in its ultimate form, and that they arise through "vortices" and "pressures" in the ether, and are more or less concrete manifestations of this all-pervading ether !

Not only is the ether all-pervading, but it *is* all. Every particle, all the way down from the hottest star to the meanest piece of rubbish which we fling away, consists of different presentations of the one and only thing which exists. Does not this demonstration completely carry out the prophecy of "showing a new heaven and a new earth" ?

I will add no remarks of my own to attempt to explain the wonder. It would be to put on the harlequinade, after such an amazing transformation scene. *I will bring this portion of my paper to a close with another long and illuminating quotation given as a "summing-up" :—

(1) Negative electricity is made up of unit charges called corpuscles, or electrons.

(2) Static electricity is due to the action of these corpuscles at rest.

(3) Current electricity is due to nothing but these corpuscles in motion, whether through gases, liquids, or solids.

(4) Magnetism is a force developed in the ether at right angles to the direction of motion of the corpuscles.

(5) Light and other radiations are due to disturbances in the surrounding ether, caused by a change in the motions of the corpuscles.

(6) Self-induction of an electric current and the mechanical inertia of matter are identical, and they are due to the electric charge, or corpuscle in motion.

(7) Mass or quantity of matter is simply the ether carried along by the corpuscles in its motion ; it is by no means a constant quantity, but depends upon the velocity of motion of the corpuscles.

* (8) The atoms of matter themselves are made up of the same negative charges or corpuscles, each aggregation of corpuscles being surrounded by a sphere of positive electricity.

(9) Consequently, matter, in its last analysis, is identical with electricity.

PART II.

Whether we have been unconsciously liberating and utilizing these ions for the last hundred years, or not, a vista of their usefulness and—in my opinion—the most hopeful prospect which has ever brightened the medical horizon, is bound up in them and their applications towards the cure or banishment of disease.

I wish I had the opportunity of access to even a limited and cheap outfit of apparatus, as I think it would be easy and incalculably important to find out whether we have owed our success in our distinctive therapeutics to the unconscious anticipation of this wonderful discovery. Apart from that question, there is an imperative call for us now to develop this new hope, and utilize to the utmost the aid which these ions offer us. I am of opinion that in them, if we have not an established and glorified homœopathy, then we have an advance even upon homœopathy, the limits of which are only the limits of our ability to develop it. When these ions are made to travel in a circuit, they have the power of breaking up and carrying along with them drugs, and in this way it is possible to convey infinitesimal portions of medicines into the very minutest cells of the body.

If a pad soaked in a solution of a drug be placed upon the skin, and the current passed, the solution is "ionized" and its particles carried by the ions into the structure of the cells. The dose may be microscopic, but its application is direct in a way never before imagined, and the results greater than ever previously dreamt of. A 1 per cent. solution of cocaine passed into the tissues in this way produces an anæsthesia far beyond that obtainable by hypodermic injection of even a maximum dose.

Of course there are dangers in its very blessings. Leduc tells us that on one occasion a rabbit upon which he was experimenting died unaccountably. He discovered that the electrode used had at a former time been used with a solution of strychnia, and that his assistant had carefully washed the pad, and thought he had removed all traces of this drug. Nevertheless, the rabbit died of strychnia poisoning. The solutions used are dilute, never more than 2 per cent., and often 1 per cent.

The *modus operandi* is to have a large indifferent electrode, which may be an arm or foot bath, or a moist pad upon any convenient part of the body. The part to be treated is then covered with a pad of pure lint or other suitable material soaked in the medicated solution, the active electrode applied and fastened in position, and the electric current passed, the ordinary strength being about 2 milliampères per square

centimetre of the active pad, and the time ten to twenty minutes. These strengths and periods are lengthened when special effects are desired.

Lupus, tubercular, varicose ulcerations are treated with zinc solution, and great improvement results. Copper salts for rodent ulcer, lupus erythematosus, and sycosis and ringworm. Lithium on the positive side with potassium iodide on the negative has been found to give instantaneous relief in acute gout. Magnesium solution, with a carbon electrode, removes multiple warts. Salicylic acid—the sodium salicylate—relieves sciatica, rheumatism and neuralgia; as also does quinine bisulphate. Sodium chloride with the negative pole breaks up adhesions and fibrous tissue, and has cured ancient pleuritic adhesions; potassium iodide causes absorption, and relieves thickening.

Strictures can be removed by this treatment. The passage of an ordinary sound and connecting it to the current causes the action to be concentrated upon that site where the sound is tightly nipped and the thickening tissue is absorbed.

Inoperable malignant tumours have been removed, but in this case, as prolonged action and intense current is necessary, the treatment is very painful. It is necessary to keep the patient under chloroform for an hour or longer, and to pass zinc ions into the mass from various points, using a current up to 600 milliampères. Wherever these zinc ions are thoroughly driven in, the tissue is blanched and destroyed, and the mass sloughs away, leaving a wound which in the most favourable cases heals with ease, and results in comparatively little deformity.

I have myself used many of these, and in some cases the results have been wonderful. A young man, aged 20, came to me with a large goitre. It was growing worse, and interfered with breathing. As he lived in Manchester it was not possible to carry out complete treatment—say two to three weekly applications—but he has come over once a week for about ten weeks, and the goitre has reduced more than one and seven-sixteenths of an inch. It now is only observable at the root of the neck, and causes no inconvenience. A 2 per cent. solution of potassium iodide has been passed for fifteen minutes, latterly the current strength getting up to 50 milliampères. In his case I have experimented on my own account, and although I have never seen that anybody else has tried it, I have latterly given him the last five minutes of each seance with the combined current—the constant current to drive the ions in, and the sinusoidal to stimulate the muscular fibres, and in this way I have hoped to accelerate progress. I am convinced that it has materially assisted in this case. Of course he has had medicinal treatment as well, but his progress has been far beyond any dream that my previous experience in medicinal treatment alone could inspire. I am now having the treatment applied in four or five cases which came to my out-patients, and in each one diminution is noticed.

I have at present in hospital a case of bad rheumatic knees in an old woman. She has had several applications with sodium salicylate and chloride, and improvement has certainly followed.

Another freakish experiment of my own was to seek aid by this means in a case of amputation of the arm, where the patient had been almost dead from septic processes. After much anxiety, I got the stump to heal with the exception of two long sinuses, and as we had experienced great trouble previously from burrowing, I feared another edition of the same mischief. I had his stump put into a jug of salt solution, and metallic probes inserted in the sinuses to convey the current. This procedure assuredly helped to stop the suppuration in the sinuses, and they have healed up excellently.

The science of ionic medication is still in its infancy, and I have only recently been born into it, so the personal contributions to its favourable claims of which I am capable are too limited in extent. Still, all the evidence I can give is favourable. The testimony or recommendation of any man is of no more value to the receiver than is his personal estimate of the giver, so that to each of you the gain through my account of this new development of medical science will carry a varying weight. For what it is worth to anyone, or to all, I offer it, and would only ask further this evening that you permit me to demonstrate the necessary apparatus and its method of use.—*The British Homœopathic Journal*, February, 1911.

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[No. 4.

THE RELATION OF DIAGNOSIS TO THERAPEUTICS.

BY PLUMB BROWN, M.D., SPRINGFIELD, MASS.

When we have to do with an art whose end is the saving of human life, any neglect to make ourselves thorough masters of it becomes a crime. It is claimed by some, as a fact, that Homœopathy is decreasing and that in a few years nearly every practitioner of that school will have disappeared. Is there any truth in this, and if so, why is it?

If we, as a body of practitioners assembled here today, stand for anything commendatory, we owe it collectively and individually, in no small measure, to the results achieved in our daily practice, by the administration of our remedies in accordance with a definite and characteristic law. If the law is scientific, and if we are honest in our convictions that we believe in this law, then with it we rise or fall; for our materia medica is primarily our only distinctive mark. Diagnosis—"A part—Knowledge." "The art of recognizing the presence of disease from its signs and symptoms and deciding as to its character." Therapeutics—"The science of healing." Thus our subject is the connection between the recognition of the presence and character of disease and the science of healing. It is imperative that we arrive at a proper understanding of the relationship of these two important branches of medicine—the one to the other—if we wish to do for our patients and the community in which we live,

the greatest possible good. Intelligent thoroughness is, to me, most expressive of this relationship. An undiagnosed case cured by the homœopathic remedy is of no more value, clinically speaking, than a cure made by a tyro who has no idea what he has cured. On the other hand, what can do us, as individuals or as a body of intelligent, thorough and conscientious believers in, and followers of, the law of similars, greater harm and disgrace, than a prescription made by a so-called homœopathic physician, under the cloak of Homœopathy, containing such massive doses, and manifesting such gross ignorance of the scope and action of the drugs used, that even the members of the so-called regular school stand aghast, trembling with fear for the result, notwithstanding the fact that a most accurate diagnosis has been made?

I bespeak a more thorough and conscientious work, by homœopaths in the name of Homœopathy, of diagnosis and pathology, as well as a better knowledge of the therapeutics of the so-called regulars. Let us be thoroughly conversant with the dangers, possibilities and limitations of, *all* remedial agents—allopathic, homœopathic, psychopathic, eclectic, isopathic, nosopathic and what not. "All that pertains to the great field of medical learning is ours," and it adds much to the dignity of our calling, and to our position in the medical and social world, to be able to say what was cured, as well as what cured. The first condition essential to success in the practice of any art in which tools or implements of any kind are used, is that scope and limits of the art be clearly defined. A second condition of equal importance is a thorough familiarity with the tools or implements. We as professional artisans, have three problems ever before us. When to use our tools or skill, or under what circumstances of illness are we called up to resort to the use of drugs? What implements are we to select, or what means are we to use, to ascertain the properties of drugs? When selected and their properties as thoroughly understood as possible, how are we to use them? The permanency of any art or structure depends entirely upon the stability of the underlying foundations. These underlying parts may be concealed, in

most cases are concealed, from the casual observer, but they must be substantial realities none the less, if the superstructure is to stand. We are not only interdependent, but also very dependent upon our foundation. The task for us is not to prove that others are wrong, but to satisfy ourselves that we are right. No one of us can be honest with ourselves or our patients, if our faith in the underlying principles of our profession is not well founded. We have absolutely no right to be engaged in the practice of our profession, if we have not a firm belief and confidence in the correctness of our foundation theories. If we as homœopaths have not the certainty that the foundations of Homœopathy are sufficient to support it, we had better endeavor to strengthen our faith or seek refuge elsewhere. We lay claim to being scientific. Let us see what is a science. What do we mean when we speak of a branch of learning as being scientific? What are the distinguishing characteristics of our system which warrant our claim that it is scientific? Someone has said that "a science is a body of exact definitions and sound principles educed from and applied to a single class of facts or phenomena." "Science is knowledge reduced to order or knowledge so classified and arranged as to be easily remembered, readily referred to and advantageously applied." Science is developmental, and is based upon the assumption that all nature's laws are immutable. Sciences are of two classes, those based upon axiomatic truths, which include the exact sciences, and those built up by process of induction, as the natural or empirical sciences or that class with which we have to deal in the departments of medical education. Empirical knowledge is that which we obtain by experiment, by trial, by observation; but it is not scientific until classified by some logical rule or arranged upon some continued thread of sequences. When we can group observed phenomena into order, distinguish causes from effects, discover underlying truths that are in common with the various orders, then we are studying scientifically. It is not scientific to be groping about among a detached mass of facts, handling them without method or hope of classification. However,

progressive sciences have their origin in empiricism. The fact that the heart beat, that the arteries were tubes, also that they were both full of blood, was empirical, but all of this knowledge was not scientific until Harvey discovered the circulation of the blood and made known the great psychological fact that accounted for the various other facts known before concerning the animal organism. Thus we see that empirical knowledge led to eminently scientific knowledge. Before we attempt to administer relief to the patients to whose bed-sides we have been called, what process of reasoning do we employ? First, the objective symptoms,—second, the subjective symptoms. After arranging these into groups, we find possibly an abnormal mental condition, or a deranged digestive process, or some trouble with the respiratory organs, or we may find an unhealthy condition of the liver or circulation, and so we proceed until we are led inductively to form a mental picture of the diseased state, which picture we call a diagnosis. The diagnosis once made, we are able to deduce facts from our experience that enables us to foretell, at least approximately, the future of the case—the prognosis. Having studied the case in all its parts, we next ask ourselves, what remedy, and in making this application we follow the same lines of thought which we followed in making the examination. The accuracy of our prescription will depend upon our training, experience and judgment, and in no small degree upon the correctness of our diagnosis. If we make no error in determining the totality of the symptoms (in which art the thorough diagnostician should be most proficient) or in selecting the remedy from the materia medica, we can with scientific certainty determine the result. All these processes are so very rapid we scarcely realize them. Theories are necessary in all scientific research. It is said that “All of the laws referring to the same class of phenomena taken together constitute a physical theory.” It matters little whether we call our medical faith a truth or a theory, for like the atomic theory of chemistry, it is a scientific notion of medicine that is in accord with the known facts we have, and when applied does not fail to lead to anticipated

results. It had its origin in empiricism, but has gone beyond the experimental stage and reached into the scientific. Over again this is a system that began in empiricism and ends where it began. They do not even lay claim to any scientific definitions, laws or theories for their therapeutics. A drug is not even a law unto itself, simply an experiment. We claim to rest upon a scientific principle, a foundation rock. The other so-called system makes no such pretension, but is merely a floating mass of detached fragments. We claim to have a scientific system of therapeutics, and the law of similars is the foundation upon which we rest our claim, although to be sure we do have a great mass of unclassified and so unscientific matter. Many in our profession are warped by prejudice, and instead of testing the good in Homœopathy, ridicule it. Let us bear this ridicule with fortitude believing that the principles of Homœopathy will in time be universally adopted by all scientific, thinking people. We see increasing evidence of this in the light of more modern scientific medico-psychical research. The science of Homœopathy is in its incomplete stage, but the principles are in advance of the practice. If we cannot agree in matters pertaining to medicine, religion, politics or what not, let us abide in peaceful disagreement and treat all honorable and honest persons with deference. At all times let us seek for those things that make for peace; and let us be honest with ourselves having the courage of our convictions. We must have a reason for the faith that is in us, and the consciousness that we know where we stand. He who has reasoned with himself and calmly satisfied himself that he has adopted the policy that to his judgment is most plausible and best, is the man of convictions and truly honest. We are all intensely human, make mistakes, are confronted by disappointments and often, far too often, fail to make a correct diagnosis, or to effect a cure. But this does not disprove the probability of there being a law of cure or a science of therapeutics. Do not blame nature for our mistakes and errors of judgment. True, there are limitations to human understanding, but those limitations are largely circumscribed.

by ourselves. Our *possibilities* are unlimited. "There are more things in heaven and earth than we have yet dreamed of in our philosophy." Our *materia medica* can never be finished. Proving and verifications by unprejudiced and intelligent physician should be constantly going on, and there should be some system whereby the work of one may be corrected and verified by another. To the physician with trained reasoning powers, coupled with an honest desire to do his best, there is always strong probability of accuracy and success.

To what extent does a diagnosis assist us in making a proper prescription, or what is the relation of diagnosis to therapeutics? I am sure we all agree that a prescription based upon an incorrect diagnosis will be a very poor one, so we must either be accurate in our diagnosis or else prescribe for the case by symptoms without any attempt at diagnosis and consequently without any idea of the cause of the symptoms. What difference does it make so long as the remedy corresponds to the totality of the symptoms?—we often hear. We have before us in our mind's eye three mental pictures, one of human organism in a state of health or as nature intended it to be, one as we find it after careful examination of all signs, symptoms and their character, or as it is, and, third, a clear drug picture or the effect of a remedial agent upon the healthy organism. Now I contend that the accurate and true totality of the symptoms taken by the intelligent and honest believer in the law of similars is based knowingly or otherwise upon at least a partial diagnosis. The diagnostician and the pathologist are both needed to demonstrate what is curable in disease. Diagnosis is not merely the giving of a name to a certain group of symptoms, but properly studied gives to us the ability to determine the true totality of the symptoms. To be a true follower of Homœopathy as laid down for us in the *Organon* and other writings of Hahnemann requires a vast amount of hard and conscientious work. No drones should ever attempt to study, much less practice Homœopathy. In all that I have said I may have failed to establish positively any direct relationship between

Diagnosis and Therapeutics, other than that previously given, namely, intelligent thoroughness. We must all admit that a diagnosis is not an entity, and we may administer our therapeutic agents with most telling and gratifying results without any pretense at a diagnosis. The self-made man who has so developed his every God-given faculty,—possibly against great difficulties, so that all who know him, respect and admire him, and whose influence is felt throughout the community and even the State in which he lives,—would undoubtedly have been even a more potent force, had he had the opportunity of widening his field of vision and developing more fully his talents by a thorough college training. So the therapist and symptomologist may do most admirable and commendable work without much pretense at diagnosis, but how much better work we could do and how much greater respect we could demand and expect, from the entire medical profession, as well as from the community in which we live, if we added to our knowledge of therapeutics a thorough and accurate knowledge of pathology and diagnosis! The seemingly almost marvellous results obtained from the administration of the carefully selected and well administered homœopathic remedy, is of great value; but how much greater value to all concerned, it is and will be, after an accurate diagnosis has been made! Let us see to it that we keep our poise and do not go to extremes. Symptomatology, diagnosis, pathology and therapeutics should go arm in arm, then we can turn to our records and show to the world that we as homœopathic physicians have ability second to none, are intelligently thorough, and scientific in the fullest sense of the word. The experience of years has proven that the law laid down by Hahnemann and his followers is undoubtedly the most scientific and certain guide for the treatment of the sick; but it has not proven to be the only law of cure or that therapeutics is the whole of the science and art of medicine. I believe he is the most scientific and successful physician who first makes in all possible cases a thorough diagnosis and who understands all methods of treatment, hygienic, dietetic, psychic,

drugs and all other useful agents, and is liberal enough to employ whatever will be of the most benefit in the individual case. Time will not permit of my speaking of the chaotic condition of medical science during Hahnemann's time. He not only exposed and overthrew the errors then existing, but he also founded a system of therapeutics based, at least, upon nature's laws. Modern medical science is still somewhat of a chaotic condition, save for some few branches, and in so far as they are successful, I feel that their success is based upon the law of similars or the definite principle of Homœopathy, "*Similia similibus curantur.*" In order to practice the art along this definite principle, we must thoroughly master our materia medica and acquire the ability to intelligently use it, as well as all the means at our command in diagnosis and pathology. If lacking in knowledge and ability to intelligently use either of these very important branches, especially that of our materia medica, we are almost certain of being disappointed in the application of the art and science of Homœopathy and so drift into the use of all sorts of palliatives. Another necessary adjunct to the successful application of our art is the preparation and proper method of applying drugs. We have all had experience confirming Hahnemann's theory that triturating and diluting greatly increase the medicinal quality of drugs. Modern science is daily verifying this in the ion theory, the revival of the tuberculin theory and its modern application, also the grand work being done by such men as Prof. E. S. Bailey of Chicago with the use of the radio-active minerals, having by these lights already proven conclusively and scientifically the power of dynamics. Thus the potency of the imponderables is revealed and confirmed. How infinitesimals act, has been, and is still, a bone of contention. Because I firmly believe that every homœopathic physician should so qualify himself that he will be the best and most thoroughly accurate diagnostician and pathologist possible and also believe in the potency of infinitesimals, it does not follow that you must so believe, but I simply bespeak a wider charity for all aids and

supplements which the honest physician and surgeon is daily using as well as a more intelligent thoroughness in their use. As science opens up new avenues to our vision, she reveals new and useful additions to our armamentarium. Homœopathy is a system of rational therapeutics. Its cardinal principles have been, in the light of modern research, entirely vindicated and it has stood the test of a century, and it has a right to survive and will survive; and unless we are alert, work hard and study intelligently, thoroughly, diligently and loyally, we may some day awake to a realization of the fact that modern science has literally swallowed our golden egg and left us stranded far behind. Let us ever see to it that we are close students of "all that pertains to the great field of medical science," which is ours as well as close and thorough students of the laws, as laid down by Hahnemann, and verified by his faithful followers,—and then with our beloved Helmuth we may sing—

"Look down, O spirit, from thine unknown sphere,

Behold the days of persecution past;

See this assemblage of thy followers here,

Proclaim the triumph of the truth at last.

Behold the once torn waters of the sea

Of Therapeutics breaking on the rocks

Of doubt and error and uncertainty,

Tearing the life-boat with incessant shocks—

Now, guided by precision's better chart,

On it the mariner shall safely steer,

And, taught by thee, with thankfulness of heart

Shall watch the beacon and dispel his fear.

Among the benefactors of thy race,

Who stamp their impress on the fleeting years

That grow to centuries, shall be thy place

Of honor, ceded by thy willing peers.

Among the epoch-making men, whose thought

Illuminates the world, there shalt thou stand,

Thy battle for humanity well fought,

Bearing thy mottoed banner in thy hand;

Then shall the sons of Aesculapius bring

Their votive offering of thanks to thee,

And all the nations of the earth shall sing

The grand Te Deum—Homœopathy !!"

The New England Medical Gazette, January, 1911.

OBESITY.**BY FRED. J. E. SPERLING, M.D.****Wilkes-Barre, Pa.**

This paper has been prepared, not to give so many new ideas, but to refresh our minds of the safe and reliable methods which are now being used successfully in the reduction of superfluous tissues.

From the various reports of articles published on obesity, we are led to believe that medical treatment in a general way, has not proven a success. That success is only gained by relying simply upon a severe prolonged diet. By careful investigation among articles published in foreign journals, one may find many safe methods to pursue to overcome corpulency.

* A certain quantity of fat is necessary to improve personal appearance and to protect certain organs. To these organs it provides nourishment, and maintains equal temperature. Thus it is stored up in cells in various portions of the body, in some places more, in other places less. Fats in excess constitute a corpulence, or obesity.

It is well known that stoutness to a certain degree is indicative of good health, while an over-abundance of fat causes serious symptoms. Such symptoms as dyspnoea, dislocation of abdominal organs, altered circulation, interference to locomotion, insufficient oxidation of the lungs, and numerous reflex nervous symptoms. In excessively stout people the free movement of the diaphragm is interfered with by the large masses of fat which collect about the omentum. By having a collection of fat over the body, the heart is compelled to overwork, since the vascular surface is increased, and more blood pressure is required to fill the vessels.

This superfluous amount of fat usually collects on the breast, abdomen, about the heart, kidneys, and in the omentum. The nutrition and function of these organs are interfered with by the collection of fat cells in and about these structures.

Opinions vary as to the cause of obesity, some cases are undoubtedly hereditary, others may be due to a functional dis-

order of the liver, improper elimination, over-indulgence with alcohol, excessive eating, diseases of the kidneys and the heart, congenital small lungs with insufficient oxygenating capacity and absence of lung expanding exercises. In my experience most cases were caused by excessive eating, and drinking, lack of exercise and faulty elimination.

Many obese use alcohol and continue to use it since in most cases it adds force to the body. It preserves the tissue by substituting itself for food in the oxidizing process.

No sane person will attempt to take treatment to reduce superfluous fat that would endanger health. Many of the drugs administered act as slow poisons to the system. Some cases are reported where the patients were seriously injured, and their health was impaired for life. The common dangers are ruining the alimentary tract, especially the mucous membranes and digestion; consequently when the drug is continued mal-assimilation and mal-nutrition ensue. If the drug is too heroically used we may have anæmia, general debility, tuberculosis, etc.

Medical treatments are not a failure, nor have they proven unsatisfactory when given under due precaution. Many drugs which are not injurious to the health, will reduce the weight, causing atrophy of the glandular structures and consequently producing complete emaciation.

There are numerous remedies which have been used more or less successfully in reducing superfluous fat. Among the most common drugs used are arsenic, bromides, iodine, lead, mercury, sour wines, lemon juice, phytolacca berries, etc. Other means of reducing weight are diet restrictions, fish diet, semi-starving, purgatives, various baths, smoking, chewing, exercises, etc.

Many of the named drugs when used cautiously for a short time are very useful to reduce a small amount of the body weight; however, when used in quantities sufficiently strong and long continued to reduce a large amount of fat, they likewise destroy other structures of the body; therefore are harmful to the health.

Some claim that the drug aids by saponifying the fat, while others claim that it causes numerical cell atrophy, consequently

either or both stimulate the lymphatic or absorbent system, causing reabsorption and destruction of the physiological constituents of the fat cells and the cell membranes and red globules, and as these perish, vitality is lost and health is impaired.

My experience has been in treating the uncomplicated cases of obesity. It is very important in examining a case of obesity to decide with great care whether the reduction treatment is necessary and advisable, and if so, what kind of treatment shall I select so as to be best adapted to this particular case. Many apparently healthy men have been rejected by insurance companies owing to their great heft; consequently they seek some reduction treatment. If a person is stout by heredity, he will continue to be stout regardless of the treatment.

The habits of an obese patient are often very hard to overcome and are usually more difficult to overcome than any other part of the treatment. If the patient does not co-operate with the physician, it is useless to seek his aid. Men of means often over-indulge in food and alcohol, and do no exercising: consequently, they ought to take less food than the man who works hard. In the working man his food is used for fuel and energy, while the gentleman's food is stored up in fat.

Study the cause and the effect and this often suggests the method of treatment. Corpulency produced by the digestion of foods of high nutritive value, taken at the extra dinner, tea and luncheon, are easy to treat by diet restriction. Again the case of dinners plus excess of alcohol and no exercise, these give us a more serious case to treat and it is this class that often fails to reach the desired results when put entirely upon the dietetic treatment. Most of my uncomplicated cases of obesity were patients who weighed on an average from two hundred to two hundred and seventy-five pounds.

My first suggestion of treatment aside from the diet list which appears in this article, is in the use of the natural kisingen and vichy waters or salts. The waters reduce the weight the quickest. Anyone selecting this form of treatment to diminish over-fatness must be willing to give it at least a four

months trial, and then when the decrease is noticed he will be encouraged to continue the treatments.

Most of the over-fat people we meet have tried one method or the other and after awhile, quite, either because they have become disgusted or careless in their course of treatment.

The average case begins to lose weight at the fifth week after taking these salts. In order to detect this loss of tissue a good scale must be selected and one that is accurate. Weigh your body every two weeks with same weight clothes and carefully record the weight in a book. Measure the girth and record same.

If a patient can honestly and faithfully follow the physician's instructions, I would suggest that they should begin their treatments by drinking a large glass of kissingen water, or a tablespoonful of kissingen salts, dissolved in a glass of water, about a half hour after each daily meal one day, and a similar glass of vichy water, or a table spoonful of vichy salts dissolved in a glass of water after each daily meal the next day, and persistently continue to take these drinks for many weeks and and they will gradually notice that they are losing girth and a few pounds avoirdupois, each week; that they are becoming more active and feeling very much improved.

This treatment will relieve them of the discomforts and dangers of obesity. I have found that these artificial waters are not always accessible nor so easy to carry in travelling, nor are they always fresh so I would advise that you specify the vichy and kissingen powders. My experiments have been with the Wyeth's preparations since they were the only salts accessible; however, the druggist will order any kind of salts you may desire to prescribe.

Upon a very few occasions the patients reported that they could not continue this treatment owing to the disordered stomach or to the too free purgation. In such cases I found the stomach symptoms were due to taking the salts upon an empty stomach; symptoms cleared up after suggesting the eating first and follow with the salts. When too free purgation

takes place reduce the salts to one teaspoonful to a glass of water. If this fails to prevent looseness of the bowels, one must depend absolutely upon the restricted diet and thyroid extract tablet.

If there is a loss of more than two or three pounds of avoirdupois per week, then take a smaller glass of each at every drink. If there is less than two pounds loss each week, squeeze a tablespoonful of lemon juice into each glass of kissingen water, and also add one teaspoonful of aromatic spirits of ammonia to each glass of vichy. On the day he takes the acid drink, acidulous foods may be eaten with this, and the day he takes the alkaline drink he can avoid these foods.

These salts can be administered indefinitely since one is acid and the other is alkaline, and given in alternation do not effect the reaction of the fluids of the body. In taking these salts one finds in a few weeks that his digestive organs act with more rapidity. The secretions will increase, the bowels will become more active as this preparation not only acts as a very mild, pleasant lavative, but also as a marked diuretic.

The diet is one of the most important features in treating cases of obesity. The diet as formulated by the physiologist, in many instances, is too rigid. It is advisable to restrict the diet gradually, and excluding the starchy and saccharine foods gradually as these foods are the principle elements which are necessary for the formation of the fatty cells. It is not necessary for the obese patient to eliminate the fatty foods from his diet. It is a false impression which some people hold, that obesity is produced by eating fatty meats. The fat in the body is produced by either the digestion of the hydro-carbons, or the albuminates.

Eat three meals a day. Do not eat between meals. Do not have a too restricted diet. Alcoholics must restrict their drinking to regular meal times and then in moderation. Take an early and light supper so that from the evening meal until breakfast, the longest of the three intervals between meals, the stomach will be entirely empty during sleep and then the surplus fat held in reserve will be called upon to supply the needs of the

system. Take the breakfast late in the morning. As previously mentioned stop the hydrocarbons gradually. The usual articles of food are meat in moderation; tea and coffee without milk or sugar, or one may use the artificial sugar (saccharin), toast, brown bread, boiled or roasted fat beef with thin gravy, water and other liquids sparingly, bread with as little butter as possible; cooked or raw tomatoes with vinegar, salted or fresh fish (the small fish are the best), bouillon, consomme, beans, cabbage, lettuce with vinegar, raw celery, small onions, spinach, sour fruits, apples, grapes, oranges, lemons, graham crackers, sour wine, one egg or two eggs prepared in any form except fried can be given three times a day if meat is stopped. Skimmed milk is often used more especially in those who are stout and anæmic as this improves and increases the blood corpuscles.

Do not interdict the good things of life. Take outside exercises. Take deep breathing exercises. If unable to take the active exercise, it is then advisable to take passive exercise, as massage, etc.

Cold baths are often helpful and enjoyed by the stout people. The body temperature is lowered and fat is burned up to supply heat units to replace the dissipation of heat caused by the cold applications. If the patient stands this treatment well, then these baths can be given daily and at regular intervals; and alternate with regular turkish bath.

I have had quicker results by using in connection with the above treatment, thyroid extract tablets, five grains each, after each meal. These tablets, when given cautiously are very helpful. I have never noticed any ill effect from using this drug. This tablet is given for three weeks at a time and then discontinued for three weeks, and so on.

When it is possible, I send my severe cases to the hospital, where the patient is placed under the care of a nurse. When convenient the sanitarium is better.

The Banting's, Ebstein's, Oertel's and Van Noorden's, Weir-Mitchell's, Schweninger, Schleicher's, Salisbury, Hirschfeld's, Ander's systems have been employed; however, I have been most

successful in ordinary practice by the using of the salts and foods selected from the above-named diet lists. The semi-starvation method usually is no longer pursued owing to the daily discomfort and long suffering.

With the Weir-Mitchell treatment reports are very favorable. This system consists in keeping the patient in bed and on a diet exclusively of skimmed milk. No exercise is allowed. The Sweedish movements by hand are given or in some cases daily massage is used. The patient is usually confined in bed or on a couch for about two weeks and then is allowed to sit up and gradually allowed to walk about the room. The regular diet is cut off gradually and when the stomach rebels against skimmed milk, a bouillon or consomme is given. The patient becomes weak with treatment and success would not be gained only for the patient being in bed. The whole treatment is given in from four to six weeks, after which the patient receives the regular diet.

One must exercise due care and precaution in selecting the kind of treatment. In a number of cases I have reduced flesh rapidly by Dr. Weir-Mitchell's treatment. The physician must see his patient two or three times a week. Be sure to examine the heart and make a urine analysis from time to time.—*The North American Journal of Homœopathy*, March, 1911.

EDITOR'S NOTES.

Eskimo Babies.

Eskimo babies, it is alleged, are seldom weaned before the fourth or fifth years ; but are taught to chew tobacco and to swallow the juice even as early as the ninth month. The customs—general with both sexes—of inhaling tobacco smoke and swallowing tobacco juice seem to be of no recent growth. No evil results of either practice seem to be apparent.—*The Medical Times*, February, 1911.

Rattle-snake Poison for Epilepsy.

According to *The Eclectic Review*, Dr. L. E. Self of Texas has discovered a cure for epilepsy. A man who had for many years been a sufferer from attacks of epilepsy was bitten by a prairie rattler, and from that time has had no further attacks of the disease. Dr. Self experimented upon other epileptics by giving them hypodermic injections of rattle-snake poison, with the result that the attacks soon became less severe and finally ceased to return.—*The North American Journal of Homœopathy*, February, 1911.

Ingrowing Toe-Nails.

The American Journal of Clinical Medicine says that every case of ingrowing toe-nail can be cured in five days by the application of dry powdered alum. No pain attends this form of treatment, and the destruction of the diseased tissue results in the formation of a hard resistant non-sensitive bed for the nail, with a cure of the ingrowing tendency. The non-toxicity of the alum, its easy application, and the good results obtained from it, render it the treatment of choice, at least in cases where no operative measures are contemplated. A soap-and-water fomentation is first applied for twenty-four hours, and then the alum is applied to the space between the nail and its bed ; a tampon of cotton-wool is next placed on the alum, and the applications repeated daily. Suppuration rapidly ceases, the parts dry up, and pain and discomfort vanish almost at once.—*The North American Journal of Homœopathy*, February, 1911.

Whole Meal Bread.

An editorial note in the *Lancet-Clinic* thinks that the value of whole meal bread has been overestimated. This bread is made from flour from which the bran has not been removed. Thus it might seem to be superior to bread from which not only the bran but a considerable portion of the gluten had been removed as in the case of some fine flours. But Professor Goodfellow states in his "Dietetic Value of Bread" that the ordinary whole meal bread contains more actual waste matter than white bread, while it is not so thoroughly digested. That its ingestion in large quantities leads to an increase of waste in other foods and it may cause diarrhoea and irritate the intestine. The editor thinks that for these reasons it is better not to irritate the intestinal tract with the bran in order to save the bran and gluten but rather to make up the deficit by adding flesh or animal products to the dietary.—*The North American Journal of Homoeopathy*, February, 1911.

Leprosy in the United States.

Nine lepers were exhibited to the members of the Academy of Medicine on the evening of December 29th, 1910. In an effort to dissipate the prevalent superstitious horror of this disease the nine patients, who included a negro girl, a male negro, an Italian with advanced tubercular leprosy, a Russian, and a Chinaman, were brought to the Academy in the public tramcars, coming from various remote suburbs of the city. The general tone of the meeting deprecated the hysteria which has arisen through popular ignorance whenever leprosy has come up for public discussion in the United States. Dr. C. W. Duval, of Tulane University, New Orleans, La., who was the first to grow the bacillus lepræ in culture media, described his experiments and what he expected to accomplish with serums in producing immunity. He said that experiments with Japanese mice and other animals showed that the disease was certainly infectious by contact.—*The Lancet*, February 4, 1911.

Anæmia.

Dr. Mjalman Agner calls attention to a remedy for anæmia which is popular in Sweden—that is the nettle. He himself was cured of anæmia when he was seventeen by taking nettle soup. One of his patients, a girl of twenty, had tried all remedies recommended

in anæmia including the preparations of iron, but without apparent benefit. He ordered her then nettle soup, first every second day; then when she improved, twice a week. The patient was completely cured.

The common or stinging (*Urtica dioica*) and the dwarf nettle (*Urtica urens*) possess the same virtues, but the first is used almost exclusively. The best time for collection is the spring; the best parts to use are the roots and stalks, with only half-developed leaves. It may be used, as an infusion—a handful to two quarts of water, two or three glasses thereof to be taken during the day; but it is much pleasanter to use in the form of a freshly-prepared soup from the fresh herb.—The *Homœopathic World*, February 1, 1911.

The Brain of the Bee.

In a German scientific periodical, C. Jonescu gives the result of his studies of the brain of the bee. As might perhaps be expected from its wonderful instincts this is found to be very complex. The various divisions of the brain are described in detail, but perhaps the most interesting part is the comparison of the brains of queens, workers, and drones. The worker has, it appears, a larger brain than the queen. And since the difference between queen and worker is the result of diet during the grub stage, it would appear that the food which develops size of body and fertility is not best for the growth of brain. The "royal jelly" as a mental stimulus is a failure. In the drone the brain is not larger than in the worker, but the optic lobes are large, corresponding to the large eyes. Special attention has been paid to two "mushroom-shaped bodies" existing in the brains of insects and reaching their climax in the Hymenoptera. The conclusion is that they are organs for the combination of various sensory impressions. The *Homœopathic World*, February 1, 1911.

Liquor Consumption in Germany.

A writer in the *Reichsarbeitsblatt* estimates the annual cost to Germany of the alcoholic liquor consumed by her people at nearly £150,000,000. Taking as his basis the returns for the five years 1904-8 he finds that the average annual per capita consumption of pure spirit alcohol was 3·86 litres, while that of beer was 116·66 litres. Taking the average price of a litre of spirits as one mark

and that of a litre of beer as 30 pfennings, the cost per capita amounts for spirits to M 3·86, for beer to M 35, together M 38·86. With a population of 64,000,000 this gives a total annual outlay of M 2,487,000,000. Taking the annual per capita consumption of wine on the basis of previous estimates at 5·82 litres, and taking one mark as the average price of a litre of wine, this total is swollen by a further sum of M 372,500,000. The entire annual cost of the alcoholic liquors consumed in Germany thus amounts to something like three milliards of marks, or, as to the writer points out, more than twice the combined cost of the Army and Navy, more than four times the cost of workmen's insurance, and about five times as much as the total outlay for public elementary education.—*The Homœopathic World*, February 1, 1911.

The Effect of Repeated Doses of Quinine on the Blood.

The Post Graduate gives an abstract of the deductions of Dr. De Sandro who experimented on dogs to find the effect of small doses of quinine on the blood. 40 c gr. of the bichlorid salt for every 70 kilog. of body weight was given daily (divided into two doses). Under this treatment the amount of hemoglobin increased from the third and fourth days up to the seventh and remained at that level (varying from 3 to 13) during the course of treatment. With the increase in hemoglobin there was a corresponding but slightly smaller increase in the number of red corpuscles. The leucocytes increased to double and sometimes treble the initial number. During the whole period of cirrhosization there was no poikilocytosis, or ansiocytosis, no anisochromia, no cyanophile corpuscles, or polychromatophile erythrocytes, and no erythroblasts. The viscosity of the corpuscles was not changed. The polynuclear neutrophils were increased (10 to 13 per cent.); there was a relative diminution in the number of lymphocytes and large mononuclear cells. The globular resistance was slightly augmented and the coagulation of the blood a little retarded. On the whole it may be said that in small daily doses quinine improves the state of the blood by raising hemoglobin index, by increasing the number of red corpuscles, and by inducing a certain degree of leucocytosis; in larger doses the contrary effect is produced.—*The North American Journal of Homœopathy*, February, 1911.

Disastrous Earthquakes in Turkestan.

Distressing details have come from Vernyi, Turkestan, of the disastrous earthquake that lately visited that unhappy Russian province. It lasted for five minutes, and the first violent shock was followed by several others of lesser violence. This earthquake is one of the most calamitous that ever befell Russia. The full extent of the terrible destruction is not yet exactly known. Some idea, however, can already be formed of the enormous loss of human life, of property, and of cattle. Up to now, so say the local newspapers, more than 2000 dead bodies have been found and many hundreds are missing. Some say that the number of the last amounts to 10,000. Many thousands of different cattle, the principal possession of the native population, perished in the earthquake, and a far greater number became victims of the extraordinarily cold weather that was prevailing at the time, of hunger, and of the snow-storms. Many rich families became beggars, many camped in the snow-covered fields, the temperature being about 30° C. below zero, and the death-roll will be heavy if help is not forthcoming. Mothers are unable to feed their children, and the mortality among the latter is appalling. The Russian Government is doing its best to alleviate the crying misery, but its means seem to be limited, for it would be necessary, to begin with, to construct some 100 villages and to purchase cattle for thousands of families. The Tsar has shown great sympathy for the stricken population, mostly Mahomedans, and has sent a large sum from his private purse, and the Tsarina has opened a list of subscriptions. Every offer is gladly accepted—money, clothing, building material of every description, petroleum, flour, &c. Twenty-three years ago Turkestan was visited by a somewhat similar earthquake, but it was not of such a calamitous extent. Help this time is also being sent from different parts of the Turkish Empire.—*The Lancet*, February 4, 1911.

Functional Conditions of the Stomach and Intestines.

The Functional Conditions of the Stomach and Intestines are considered by F. Billings (*Illin. Med. Jour.*, Sept., 1910) with relation to gallstone disease and cholelithiasis. Nausea and vomiting usually attend acute gall-bladder infection, or biliary colic. There may be epigastric pain between attacks. Spontaneous or induced vomiting may give relief; as may also a simple carminative.

Of sixty cases, in which the digestive power of the stomach was noted, fifty suffered from cholelithiasis with cholecystitis and the remainder from cholecystitis with cholelithiasis of the gall-bladder and the common duct. Most of these patients had practically normal gastric juice. In a few cases the total acidity as high—122, 112, 116; in a few others the total acidity was low, with no more total acidity than would be expressed by the acid phosphates of a test meal. All the remainder showed normal acidity. Hyperchlorhydria was found in only a few cases. Motility was disturbed in 45 of the 60 cases during acute exacerbations of the disease. Between the paroxysms there was practically no anatomical insufficiency of the gastric muscle. The fasting stomach of the morning was empty in every patient examined; in all but two cases there was an entirely empty stomach with a seven hour meal. With two exceptions there was an absence of blood in the stools. It would seem that the digestive power of the stomach was not disturbed by cholecystitis except in acute attack or in exacerbations of the chronic disease; the disturbance was then due to pain and was manifested by nausea and vomiting. Billings found constipation the rule in cholecystitis and gallstone disease. Clay stool and fetor accompany obstruction of the duct and jaundice. The absence of bile from the intestinal tract results in loosened peristalsis and flatulence; and there is more free fat than normal in the stool because of the loss of influence of the bile upon the digestive power of the enteric and pancreatic juice.—*The Medical Times*, February, 1911.

Poisoning in the Industries.

The first symptoms experienced by workers in occupations where injurious chemicals are used are referred to the nervous system. The diagnosis is difficult by reason of the similarity between the effects of certain chronic intoxications and infectious diseases, the great variability in the reaction of different individuals to the same poison, and by the difficulty of discerning the poisons at fault (which may be used in the industry for only a brief period or under a fancy name). Lead is employed in some fifty different industries, many young women work with it without knowing that they are having anything to do with lead—as in making or packing stiffened tissues, laces, fringes, bottle stoppers, paints for china, papers, varnishes, cements and repairs for electrical apparatus. Carbon monoxide

poisoning from portable steam engines occurs to workers in tunnels, and to others from salamanders used in drying new plaster. The escape of water gas into a factory room causes severe headaches and vomiting, with speedy recovery in some cases, but in others with the development of weakness in the legs, and total amnesia—symptoms not subsiding for weeks. In 45 cases of severe carbon monoxide poisoning in which the patients survived, the majority presented tardy symptoms. Anilin and nitrobenzol is used in the manufacture of washing powders, hair oil, shoe blacking and various essential oils; such substances are especially dangerous in these circumstances, as they are used under fancy and various names as perfumes and essences, so that their poisonous nature is not suspected. In two cases death was directly traceable to the nitrobenzol used in making a washing powder or shoe blacking; and in a third case a child had bloody urine the day after some shoe dressing had been applied to the bare feet. The less saturated the substance the greater the tendency to chronic disturbances, both local and general; benzin, for instance, has a less toxic action than benzol, and the toxic action increases in allge alcohol, acrolein, etc. Thus the acute intoxications often display peculiar features, due more to the special physical properties of the chemical; the chronic intoxications are more the result of the chemical properties than of the physical. Most industrial poisonous substances are fatal only with relatively large doses; but they induce special and often typical symptoms, especially as the part of the nervous system, when the organism is long subjected to their influence.—The *Medical Times*, February, 1911.

Self-purification of Streams.

Dr. F. G. Ruediger (N. Y. Med. Record) has found that colon and typhoid bacilli disappear much more rapidly from polluted river water during the summer months, than during the winter months, when the river is covered with ice and snow. The destruction of these germs in the river water in summer is in large measure due to the growth of microscopic plants and other organisms, which apparently give off dialyzable substance harmful to *B. coli* and *B. typhosus*. Several years ago Frost clearly showed that such substances were given off by the saprophytic bacteria; and Ruediger's experiments simply confirm those of Frost's though attacking the problem in a slightly different way. The effects stated were lost in the winter, as no growth took place after 0° C. The

sun's direct rays were an important factor; their effects were entirely lost when the river was thickly covered with ice and snow. Ruediger's investigation was of practical value; it explained why some of the northern cities, where sewage polluted river water is used in the water-works system, are more frequently troubled with outbreaks of typhoid fever during the winter months. This fact was illustrated by Minneapolis last winter; and, no doubt, also by Lawrence, Mass., before the installation of its filter. When bacteriological analyses of sewage polluted river water are made at the site of a proposed water-works intake pipe it is important that samples should be collected and analyzed both in the winter and summer. Such summer samples do not give reliable information regarding the condition of the water in question when the river is covered with ice and snow. Analyses show that the pathogenic bacteria from the sewage travel several times as far in the water under the ice, before they are destroyed as they would in an open river, during warm weather.

In the discussion Dr. H. W. Hill, of Minneapolis, Minn., corroborated Ruediger; and stated that *B. typhosus* might die out in going down the river in summer under conditions where they would exist during the winter. Dr. P. H. Boyce, of Ottawa, Canada, considered the question of sedimentation, and instanced Pettenkofer's test at Munich, which showed that 90 per cent. of all bacteria in water by dilution and by sedimentation had disappeared within a distance of ten miles. Dr. E. C. Levy, of Richmond, Va., stated how at a previous meeting he and Dr. Freeman had brought out the point made by Dr. Ruediger, but had not attempted to explain why water-borne typhoid was a disease of winter months; but they proved to their satisfaction that such was the case, arriving at their opinion from an epidemiological standpoint; they had then no laboratory facts to corroborate this.—*The Medical Times*, February, 1911

The Tyranny of the Telephone.

Before the introduction of the telephone it was the general habit of medical men to permit no interruption of a consultation for anything short of an imperative necessity. Once the patient was in the consulting room the practitioner's undivided attention was given to that patient until the close of the consultation; and trivial messages and communications had to wait until the medical man was at liberty to attend to them. Now, however, with the telephone on

*every desk it is no uncommon thing for a consultation to be frequently interrupted while queries are answered from some other patient, or appointments made, some of which may even have no bearing on professional work at all. Many patients resent this, and we think not unreasonably; and in the matter of one well-known consultant formal complaint has been made to us. Surely it would be more fitting on the part of consultants to entrust the telephone during consultation hours to an assistant who could decide whether messages should be brought immediately under the notice of his principal, or should await the termination of a consultation in progress, as in former days verbal messages, notes, or callers had to do. The situation is not so common in the routine of general practice, and here it may be to some extent inevitable, but as far as possible it should be guarded against. Urgencies are no more urgent to-day than they were then; while trivialities should not be allowed because they are discussed by telephone, to assume a precedence which would be denied to an attempt to intrude them by verbal message, note or personal interview.—*The Lancet*, February 25, 1911.

Canned goods and the Public Health.

The report which Mr. Otto Hehner, analyst for the county of West Sussex, has recently presented to the county council points out the desirability of legislation dealing with the canned goods trade. During last quarter he analysed seven samples of preserved (tinned) lobster and seven samples of preserved (tinned) salmon for the purpose of detecting the quantity of metal that had been dissolved off the surface of the canisters. The following was the result expressed in grains per pound:—Lobster: 1.28, 0.27, 0.12, 4.47, 0.80, 0.51 and 0.09; salmon: 0.46, 0.21, 0.77, 0.24, 0.51, 0.38 and 0.35. These figures show that preserved (tinned) salmon is preferable to lobster, but Mr. Hehner explains that the quantities of tin dissolved in the salmon are comparatively small, probably because the oil in which the salmon is packed to some extent protects the surface. The quantity of contamination increases with the age of the goods, because the acid juices continue to act upon the metal. In course of time, therefore, all such preserved goods as are capable of attacking tin will contain an important quantity of the metal. Such materials are all meats and fruits; not condensed milk or syrup. The fixation of an age limit seems advisable. The date

of packing ought to be compulsorily stamped on each can. It would be easy to ascertain when the maximum tolerable quantity, suggested by the Local Government Board at 2 grains of tin per pound, has been reached, but it would vary with the acidity of the material. The suggestion that the date of packing the goods should be clearly indicated on each can is an excellent one, and one which could easily be introduced. Dr. G. S. Buchanan and Dr. S. B. Schryver, on behalf of the Local Government Board, a year or so ago, were not able to gain any decisive evidence that tinned foods caused bodily harm attributable to tin salts, but it seems a pity that the simple precaution of lining tins with an innocuous varnish is not very generally adopted.—*The Lancet*, February 25, 1911.

A Vegetarian in Psoriasis.

Bloch reports a case in which a man of 40 had had for seven years typical psoriasis of the nails, hands, scrotum and parts of the body, which had resisted all forms of local treatment and arsenic. Bloch ordered him to drop meat from his diet and the result was surprising even in two weeks, and not a trace of the psoriasis was left by the end of three months.—*The North American Journal of Homœopathy*, March, 1911.

Danger from Wallpaper.

The *Medical Summary* calls attention to a law passed some years since by the New York Legislature requiring landlords of tenement houses to remove from the walls the paper before repapering. It was thought that germs nested in wall paper and the microscope has since proven, the wisdom of the law. Besides containing germs, papers are often impregnated with poisonous colors. Up-to-date architects are using tiles, metal and paint instead of paper. Metal or tile walls are more easily cleaned than paint, while paint is more sanitary than paper or leather although more expensive. German papers assert that disinfection with formaldehyde proved a failure.—*The North American Journal of Homœopathy*, March, 1911.

Deaths under Anæsthetics.

The question of the best and safest anæsthetic for general and special use, and of the administration of the same, has been widely debated in all civilized countries of late year. Of course, the chief

arguments have been between the supporters of chloroform and ether, and although no definite agreement has been come to, it is somewhat significant to note that of the eighty or so inquests held by the coroner of the city of London during the past nine years nearly all have been on patients who have died in hospitals while under the influence of chloroform or of mixtures containing chloroform administered for the purpose of operating.—*The Journal of the American Institute of Homœopathy*, March, 1911.

Deaths in the Streets.

Among the perils of the cruel city are deaths by being crushed under vehicles. Of 218 persons killed in Manhattan Borough by vehicles in 1910 (almost double the number of all ages killed in 1900) ninety-nine were children under 14 years old, as compared with 31 children killed during the first year of the decade preceding 1910. The population of Manhattan has not doubled and trebled in ten years, but these figures evidence that the dangers in its streets have doubled and trebled in that time. More than twice as many children were killed by wagons and twenty-five times as many were killed in 1910 by automobiles as in 1900. Of course not many of these treacherous vehicles were driven through the streets a decade ago, when only one child was killed by such agency in this borough; but the figures should be significant to parents and teachers, and possibly also to the municipal authorities.—*The Medical Times*, March, 1911.

Snakes in Austria.

Snakes are common enough in many Oriental countries; few persons are perhaps aware that they are very numerous in Austria, and that the Government offers a reward for every snake killed. A contributor to *Chambers's Journal* tells that in 1908 no less than 273,000 snakes were destroyed, of which all but 4,000 belonged to the venomous species. To aid the rural inhabitants in their warfare the Government authorities have supplied a simple appliance whereby, in the case of a bite, the possibility of a fatal result is reduced to the minimum. This instrument comprises a small knife wherewith the wound of a bite is immediately enlarged, and in the cut thus formed a concentrated solution of permanganate of potassium is injected. That such a precaution is valuable is borne out by the

fact that out of the 140 cases of snake-bites reported in 1908, only six proved fatal.—The *Journal of the American Institute of Homoeopathy*, March, 1911.

Grape Juice in Typhoid.

D. W. Reed in the *Medical Summary* states that milk, sweet milk, is the very worst diet in typhoid, because it presents a very excellent medium for the typhoid bacillus. Milk becomes a solid after entering the stomach, and is found post-mortem, in both the stomach and intestines in large, tough, malodorous curds. To inhibit the growth of germs, an acid medium is required. Milk is not sufficiently acidulated in typhoid because the secretion of the gastric juice is very low. By experiment it is found that bacillus typhosus develops very badly in grape juice. Almost any kind of fruit juice will act as well. Hence the typhoid patient should receive an abundance of grape juice, sour apple sauce, artificial butter-milk made with lactic acid germs, and should have all the water he drinks acidulated with hydrochloric acid. In this way the intestinal canal is made a very unfavorable place for the growth of germs, and if in addition, the canal be thoroughly cleaned out at the very beginning of the disease, the fever will run a very moderate course and convalescence will be established in a week or ten days.—The *North American Journal of Homoeopathy*, March, 1911.

Meat and Immigration.

An editorial in *American Medicine* in commenting upon the rise in the price of meat, concludes that the increased cost is due to the flood of immigrants from other lands. When land was free in America, meat was produced in such amounts that the poorest laborer could afford it three times a day. This attracted the poor of other lands, where meat could be afforded only once a month. So the price of meat may be expected to keep on rising until it is as difficult to get here as in Europe, or until it is beyond the reach of the poor and an occasional food for the middle classes. America has always been more or less free from diseases of under-nutrition which have afflicted Europe, and it is our meat diet that is generally recognized as causing the magnificent development of the native-born children of immigrants who are undersized as the result of under-feeding. The intellectual accomplishments of these new

types have astonished the world, for they have far surpassed their ancestors. On the other hand, the results of a non-meat diet are not necessarily bad, if there be plenty of nitrogen in other forms. These we have in fish, eggs, milk products and the nitrogenous grains. So imaginary ills need not be a cause for worry.—The *North American Journal of Homœopathy*, March, 1911.

• The Manna of the Israëlites.

The manna of the Israëlites has been identified by Ebers with the exudation of *Tamarix galina* which is said to agree in many respects with the description given in Exodus, and to be still regarded by the Arabs as a dew falling from heaven. The honey-like substance yielded by *Alhagi camelorum* (the camel's thorn) has also been held to be the true manna, but this resembles rather too closely the manna of the shops. Upon exposure it hardens into a brown paste, it is sweet to the taste with a suspicion of acidity, and is distinctly laxative. Mr. A. J. Swann, in his recently published *Fighting the Slave-Hunters in Central Africa*, suggests an entirely different source. He found on the high plateau, composed of sandstone and granite, which separates Lake Tanganyika from Lake Nyasa, a curious white substance very similar to porridge, and possessing all the characteristics of the manna of Scripture. He says: "In appearance it resembled coriander-seeds, was white in colour, like hoar-frost, sweet to the taste, melted in the sun, and if kept over night was full of worms in the morning." If baked it would keep for some time. The natives knew neither what it was nor where it came from; they called it "the food of God." Mr. Swann disclaims all knowledge of any such substance elsewhere, but affirms that other Europeans in Africa are acquainted with this and corroborate his account of it. He caused a cake of the stuff to be baked and sent to England with a view to its identification, but without result. It looked, he says, as as if it had been deposited on the ground in the night, in what manner he could not tell; but he suggests it might be a mushroom spawn, since tiny fungi sprung up the following night wherever it had melted. He adds: "May be some reader can enlighten us on the subject."—The *Homœopathic World*, March 1, 1911.

Digitalis.

Digitalis seems to be receiving a degree of attention which is in strong contrast with the neglect it suffered for a century-and-a-half after its first introduction into the Pharmacopœia in 1650, and perhaps the time is not far distant when its active constituents will be scientifically determined, and their respective value more accurately ascertained. It is not, I believe, much less than a hundred years since Lenoyer extracted from its leaves the alkaline substance which he called digitalia (digitalin), and it is somewhat strange, considering the importance of the plant, that we are still only experimenting with it. Stranger still, perhaps, is it that it only began to be officially used internally towards the end of the eighteenth century, though its properties had been fairly well known for hundreds of years. "Foxes glofe" occurs in the Saxon Herbarium of 1000 A.D., and again in the "Sinonoma Bartholomei," a manuscript of the fourteenth century, where it appears under the curious name of *Cerotheca vulpis* (literally fox's hand-case, which recalls the German *Handschuh*). It has always had a foremost place in our popular medical practice; Lyte and Gerard, and later herbalists, speak of its "cleansing" action, both upwards and downwards; it was used in consumption, dropsy, epilepsy, and other diseases, and Parkinson recommended an ointment made of its juice for scrofula. When at length it was admitted into the Pharmacopœia it was for this purpose, in Unguentum Digitalis, which was made by boiling the whole plant repeatedly in fresh butter. In 1783 it was introduced into the Edinburgh Pharmacopœia for internal use, and was for a time prescribed so freely that Withering, writing two years later, feared it would fall into disrepute. His treatise on its use did much to establish it in favour as a diuretic and in certain diseases of the heart. In his *Conspectus* of 1811, Dr. Clark recommends it in such cases and in phthisis, etc., but gives very minute instructions against its misuse. He prescribes gr. ss. gradually increased to gr. iij. of the powder and guttæ xv. to xl. of the tincture. It is noteworthy that these are the forms in which it is still thought best to administer the drug.—The *Homœopathic World*, March 1, 1911.

CLINICAL RECORD.

Foreign.

A SERIES OF CASES OF EPILEPSY IN
DISPENSARY PRACTICE.

BY J. EADIE, F.R.C.S.

Case 1.—Butcher boy, aged 17, been having fits, about three a week, for last eight or nine months. Fits always occur just before time to rise in morning or on rising.

Patient looks picture of health—sturdy, bright, well-nourished, red-cheeked.

Has masturbated, but not within last year.

Except fits no symptoms elicited. No aura. Bites tongue. Sometimes incontinence urine and fæces. No family history of nervous disease.

Fits described by observers were typical grand mal. Treatment. Regulation of teeth, sleep, hours of meals, diet, fresh air, cold bath in morning. *Cuprum acet.* 30 and *Placebo t.d.*

Month later.—One fit since last seen. Rep. *Placebo.*

Five months later.—Has missed attending two months. Returns because of two fits two days ago. Repeat *Cupr.* and *Placebo.*

Eighteen months.—Well since last note, till three days ago, when had another fit.

Twenty months. Reports no fit since last note.

Case 2.—Wirewinder, aged 19. Well built, intelligent lad. Fits at night for years (about four); recently also in day time—three a week he considers few—causing employer, influenced by Employers' Liability Act, to discharge him.

Treatment at several hospitals. No obvious cause for fits. General health quite good except for constipation. Bites tongue and has, rarely, had incontinence of fæces and urine during fits.

Treatment.—Cold sponging, fresh air—set him to gardening and hawking. *Nux. Vom.* 30 and *Placebo t.d.*

Month later.—Not much change as to fits. *Cuprum acet.* 30 and *Placebo t.d.*

Two months later.—No fits in day since last seen, and brother, who sleeps with him, reports fewer at night. Repeat *Cupr. acet.* 30 and *Placebo.*

Three months later.—Had two fits during night since last presented himself, no others.

Eighteen months later.—Have not seen patient for nine months. His brother tells me however that he has had no fits since my last note.

Case 3.—Dock labourer, aged 34. Fell into hold of ship five years ago, and got "concussion" of brain—in hospital for it for five weeks. Fits began six months after discharge. Always occur in bed, generally on a Friday or Saturday, three or four in rapid succession. Has been treated at many hospitals without much benefit if any.

Patient is apparently a very decent man—nonsmoker, teetotaller, kind father and in fact, thoroughly domesticated. His wife, an industrious respectable woman, tells me his mental state has altered greatly in the last four years. He used to be bright, quick, and intelligent, whereas he now exhibits considerable mental hebetude, and appears to take a long time to grasp the meaning of a question, and is very slow, and somewhat hesitant in answering. His memory for recent events is very defective. He complains of an almost constant, general, dull, headache.

The only physical signs I find is some flattening of the skull on the right vertex. I have not been able to elicit that the fits are of the Jacksonian type; nor have I been able to find any satisfactory reason for their occurrence on the Friday or Saturday nights, except that his wife and he do their shopping together on one of these evenings.

This patient has been under treatment for rising two years, and from an average of about five fits a week they are now reduced to about three a month. His wife thinks, and I concur, that his mental condition is greatly benefited, though that still leaves much room for improvement. Before attending the dispensary he had been for the previous four years under treatment at various hospitals, and his gradually increasing mental dullness gave her great concern. A pleasing feature to me about this case is the very strong, but undemonstrative, between him and his wife.

He has, among other drugs, had *Potassium iodide*, *Mercurius*, *Opium* and *Cuprum aceticum*. I imagine the latter has benefited him as much as any.

Case 4.—Servant girl, aged 22.—Five or six fits every menstrual period since the first, when aged fourteen; has also had them

irrespective of catamenia, but worse at onset of latter. Bites tongue and passes urine during fit.

Five years treatment at London Hospital, and one year in asylum, to which she was relegated from the former institution.

As soon as I saw the patient she suggested to my mind *Calcareæ*, being of the so-called leucophlegmatic temperament of H. N. Guernsey—constitutionally fat, strongly inclined to obesity. Watery white complexion. Torpid disposition. Sluggish or slow in movement. Cold hands. Low spirited.

I further elicited that she had cold, damp feet. Sweats freely. Suffers from sour eructations. Always feels cold. Constipated. Catamenia too frequent and too profuse. Tired and sleepy all day. Fits ushered in (aura) by cold sensation.

Treatment. Teeth attended to, fresh air, plain food, cold sponging. *Calcareæ* 200 *statim*, *Placebo* *t.d.*

Month later.—Much better in herself; brighter, and more active. No obvious difference in number of fits. Repeat.

Two months later.—Looks and feels still better. The fits are as frequent but patient states they now feel more like faints—not so severe. *Cuprum acet.* 30 and *Placebo* *t.d.*

Three months later.—Distinct lessening in number and severity of fits, and does not feel so exhausted after. Mother is especially gratified that patient has taken to make a noise which the patient calls singing—no sound of mirth had been emitted by her for a very long time. Her father had facetiously advised her to “arst the doctor” if a little “’emp seed” would not improve her voice. Repeat.

Four months later.—Patient had a fit, which I observed, while waiting to be seen at the dispensary. It was of grand mal type. This is the second since last seen. Repeat *Cupr. acet.* 30. *Placebo*.

Five months later.—No fit since last seen but has had what she calls “sensations”—as if a fit were imminent. Repeat last.

Six months later.—One fit in month. I am especially struck this evening by the alteration in the patient's general appearance which reminds one of the remarkable change one sees after the treatment of myxœdema with thyroid extract. She is now a bright well-set-up, active young woman. Even if one had not influenced the fits, this would have been a very gratifying change in itself. The mother now tells me she has never known her daughter so cheerful and well. Repeat last. This brings this case to date.

Case 5.—Laundress, aged 30. Nocturnal fits occurring nearly every night for many years. She has had as many as twenty-two in a week. Has been treated at several institutions, lastly at the National Hospital. Her mother states that the bromide she got there, although it controlled the fits to a great extent, caused a very marked eruption disfiguring the face, leading to contumelious remarks from her fellows which she found intolerable. For over a year she has taken no medicine.

Patient is dull and lethargic. Her florid countenance still presents a very marked acniform eruption which is stated to have arisen during the exhibition of the bromide and remained since. Her extremities are cold. She holds her face and eyes averted and looks and is "gey dour"; her people can get her to do nothing. Speech is slow and stammering. She is very suspicious and irritable, and takes no interest in life.

She suffers much from indigestion. The teeth are extremely bad and the mouth foul.

During the fits she bites the tongue and has occasional urinary incontinence. Headaches are frequent; bowels irregular; catamenia scanty and delayed.

Treatment.—Dentist to remove all stumps; cold bathing; fresh air; to occupy her mind and body with house and garden work; *Calcareo carb.* 200 *stat.*, *Placebo t.d.*

Fortnight later.—Has had teeth attended to; dentist extracted seventeen stumps at two sittings. Patient was much worse as regards fits after first extractions but second did not appear to affect her deleteriously. Has not been able to bite her tongue since.

Month later.—Is much brighter and takes an interest in things. Bowels have been regular. Repeat *Calcareo*.

Two months later.—Mother and sister report they have not known patient so well for several years. Has had five fits in two days during the last month, previously it was exceptional for her to go twenty-four hours without.

The eruption on face distresses her. *Rx. Pot. iod. gr. v., Aqu. ad. ½-oz., Sig. gtt. iii in aq. t.d.*

Three months later.—The eruption is almost gone, and she has had four fits in the month. *Cupr. acet. 30 stat., Placebo t.d.*

Four months later.—No fit since last note. She has however, at times been very irritable and obstinate. She has changed the indifferent expression for one more of slyness. *Placebo t.d.*

Five months later.—Has had twelve fits in three days following a fit of temper. Imagines people are ridiculing her. *Hyoscyamus* 30 *stat.*, repeat *Placebo*.

Eight months later.—In the last three months she has had three fits occurring on one night, after mental excitement.

Case 6.—Girl, aged two years. This patient was referred to me by a colleague who lives too far for patient to get conveniently to him.

For three months the child has been having nocturnal fits, two or three a week. Mother states that on first occasion, about 10 p.m. one night, she heard a shriek, and one rushing into the bedroom, found child stiff and blue, which condition was immediately followed by chronic convulsions. This is also the nature of the succeeding fits.

The patient is a well-nourished bright, chubby, red-cheeked child and the only symptom I elicit is the excessive energy she exhibits. She flits rapidly from object to object in the consulting room, which she as rapidly examines; the fact that she never utters a sound makes her movements almost uncanny. She might be dumb for all I have observed. Her mother, however, tells me she talks sometimes.

In this case the lack of symptoms makes a choice of remedy difficult. I, however, elect to give *Sulphur* 200 *statim* and *Placebo* *t.d.*

Six months later.—For six months I have heard nothing of this patient. She is now presented with the information that until a week ago she has had no convulsions since last seen. During the last week, however, she has had six, occurring at night. She still presents that noiseless restlessness. Repeat *Sulph.* 200 and *Placebo*.

Six-and-a-half months later. Has had two and three fits weekly in the last fortnight. *Cuprum acet.* 30 *stat.*, *Placebo* *t.d.*

Patient is going with her parents to live in the country. Mother undertakes to let me know if there are further fits.

Ten months later.—Have heard nothing further about this case, and have unfortunately mislaid her address.—The *Homœopathic World*, March 1, 1911.

gleanings from Contemporary Literature.**THE PROSTATIC PROBLEM.**

BY JAMES KRAUSS, M. D., BOSTON, MASS.

After Nicola Massa (1563) discovered the prostate gland, and Riolan (1649) and Mercier (1841) insisted that a large prostate may act as an obstruction to the bladder and thus impede the vesical outflow of urine in old men, the problem of overcoming such obstruction has come more and more prominently forward, until of late, especially since Freyer (1900) has demonstrated the ease and completeness with which a benignly enlarged prostate can be shelled out of its bed, the literature on the prostate gland appears to be taken up almost entirely with the operation of prostatectomy. But it is hardly to be admitted that the prostatic problem is exhausted with the removal of the prostate gland. Nor can it be admitted that because an old man has urinary trouble he is a subject for prostatectomy. When a patient comes with a history of urinary retention, or of irritability of the vesical neck, we have still to face and answer certain imperative questions: Is the prostate gland at fault? Is the gland large or small, benign or malignant? What indication is there for treatment? What treatment shall be instituted? Shall it be medicinal or mechanical? Shall we catheterize or operate? Shall we incise or extirpate? Shall the extirpation be partial or complete, intravesical or extravesical? Shall it be done at one session or two sessions? Shall we operate before or after imperative catheterization? When is operation contra-indicated? What is to be the post-operative treatment? What should be the functional results?

The prostatic problem relates, primarily, to prostatic obstruction of the urinary flow; and, secondarily, to the results of such urinary obstruction, results that are characterized by congestion, retention, distension, trauma, infection, intoxication, with or without atony or impending death.

I.

To be at fault, the prostate must obstruct the flow of urine from the bladder. Usually the prostate enlarges from disease, senile changes, or congenital products, and thus causes urethro-vesical obstruction. There may be prostatic and periprostatic inflammation and infiltration. There may be phlebitis of the prostatic plexus of veins. There may be prostatic stone formed from symplexious material. There may be congenital or parasitic cysts, sarcoma or carcinoma, or there may be myomatous, fibro-myomatous, adenoid or simple general hyperplastic hypertrophy of the prostate. The prostate need, however, not be enlarged in order to cause distinct obstruction to the urinary flow. The gland may be even atrophied and participate only in a more or less sclerotic contraction of the prostatic urethra.

This has been fully illustrated in a patient, a man of 56, who came on July 21, 1908, with a history of complete retention, having lasted for about a year and making the continual use of a catheter obligatory. Rectal palpation discovered only a small, flat prostate. The patient could not micturate spontaneously. A Nelaton catheter, passing over what appeared to be an obstruction beyond the bulb, brought twelve ounces of retained, foul urine, turbid, from pus and mucus, a further quantity being gradually removed with boric acid lavage. A bougie-à-boule 24 placed the obstruction between 5½ and 8 inches from the meatus. A Guyon searcher could bring no information as to contour, size, hardness. The cystoscope disclosed chronic cystitis, trabeculae, two large diverticuli with plugs of pus simulating stone, active ureters, and only a very slight prostatic protrusion. After a course of preparatory treatment, consisting of vesical lavage, internal medication, proper diet and hygiene, the urine gradually cleared up, the bladder gradually resumed a certain degree of contractility, emptying part of the urine in consequence, but still making catheterization a necessity. On September 29, I performed suprapubic cystotomy, as a preliminary step to prostatectomy, the patient's condition not permitting prolonged manipulation. On October 6, I removed through the suprapubic incision, the prostate gland with the corresponding prostatic urethra, the smallest conceivable prostate that could cause such complete obstruction of the bladder as to call for operation, the whole structure appearing to be merely a fibrous ring with a few distinct nodules, extremely small.

To complete the history of this case it ought to be said that on October 18, twelve days after the removal of the prostate, the patient passed twenty-three ounces of urine per urethram spontaneously, and, on October 21, he passed all his urine spontaneously, having no retention whatever.

II.

To decide that the prostate is at fault, we have recourse to rectal and combined palpation, the catheter, the bougie-à-boule, the searcher, the cystoscope. Rectal touch gives the external size, contour and hardness of the prostate. The catheter gives the degree, the amount of retention. The bougie-à-boule gives the length, the distortion of the prostatic urethra. The searcher combined with rectal touch gives the diameter of the prostatic enlargement as well as the contour. Bi-manual examination, the fingers of one hand pressing down on the hypogastrium with counter pressure by the finger in the rectum, gives the mobility, and, in thin subjects, possibly the vesical outgrowths as well as the size of the prostate. The cystoscope, however, is the only means that can put at rest any doubt as to whether the urinary symptoms, pollakiuria, dysuria, ischuria, nocturnal or diurnal, persistent or intermittent, complete or incomplete, are due to vesical or prostatic disease.

There may be extensive enlargement of the prostate as felt per rectum with hardly any involvement of the bladder, and there may be extensive prostatic enlargement toward the bladder with no encroachment upon the

rectum. The cystoscope is the only means by which we can ascertain not only the beginning of prostatic hypertrophy by the changes of the inner fold, but also the exact position, contour, size of prostatic outgrowths into the bladder. In order to make the diagnosis of prostatic obstruction of the bladder exact and complete, the bladder itself must be inspected.

Some, like Lydston and Deaver, say that the cystoscope is here rarely necessary. Others, like Parker Syme, have deprecated its use entirely because of the pain, irritation and inflammatory reaction that are said to have followed. But that a cystoscopic examination may be followed by pain, irritation and inflammatory reaction is no more condemnatory of the use of the cystoscope in prostatic cases than that infection which may follow catheterization can be condemnatory of the use of catheters in urinary retention. That a cystoscopic examination must be painful and harmful is an unwarranted proposition. The maxim, not to hurt your patient, is here as elsewhere paramount. Urethral instrumentation is an absolute prerequisite not merely for the treatment but also for the diagnosis of prostatic obstructions, and cystoscopy is only one form of urethral instrumentation. Without an instrument, a sound or searcher or cystoscope in the bladder, rectal palpation, which is usually thought to be self-sufficient, cannot give adequate information even as to the size of the prostate. One might think that there is considerable prostatic tissue beneath the finger when the reverse is the case, or that there is an inconsiderable amount present when, in fact, the prostatic growth is quite pronounced. Even Freyer, who relies mostly on simple and combined rectal touch for his decision on the suitability of a case for prostatectomy, says, "The only way we can determine with certainty the possibility of enucleating a prostate of small size is by the aid of the cystoscope."

The fact is that the cystoscope is not used often enough. This is probably accounted for by the impression which is abroad among the profession that cystoscopy in prostatic cases requires general anæsthesia, and the fear on the part of patients to subject themselves to a general anæsthetic for exploratory purposes. It was a revelation to a colleague from Western New York who came to me with prostatic trouble, first, to be told that I would not anæsthetize him for cystoscopy, and, secondly, to experience on himself how well cystoscopy can be done without anæsthesia, without any bad results whatever, and with accurate disclosure of prostatic conditions which up to that time, though subjected to various examinations before, were left undiagnosed. After a cystoscopic practice of fifteen years, I am free to say that when an instrument can be passed per urethram, the bladder needs, at most, only some preparation, for cystoscopy to be practised with good effect and with no detriment.

III.

It is not sufficient to make a diagnosis of prostatic obstruction. The diagnosis should establish the stage, kind, and effect of the obstruction: first, the stage of the obstruction, that is, whether it is the stage of congestion, retention or overflow; secondly, the kind of the obstruction, that

is, the pathological condition of the prostate, whether hypertrophy or atrophy, solid tumor or cyst, and especially whether the prostate is benign or malignant; and, thirdly, the effects of the obstruction on the bladder, the kidneys, the general system, that is, whether there is cystitis, stone, pyelitis, pyelonephritis, urinary infection, urinary intoxication, etc., present besides and on account of the obstruction.

With such a diagnosis, we have at once both the vital and the remedial indications for treatment.

Those that see in the prostatic problem nothing but operation are apt to put forth some very preposterous statements. One might infer that with the removal of the prostate gland, the entire pathological state, of which the prostatic obstruction is only a part, is removed. But the longer one works in this field the more he must acknowledge that there is no one routine method of treatment that can be followed without jeopardizing the interests of these patients.

Medicinal treatment is certainly indicated in the earlier stages when the symptoms are those of congestion, and the residual urine does not exceed two ounces. In my opinion, medicinal treatment is required through all the stages, effects and complications of prostatic obstruction. Picric acid, mercury, secale, pulsatilla, conium, phytolacca, hydrangea, sulphate of chromium, etc., may be useful for their effect on the prostate and prostatic urethra; belladonna, nux vomica, etc., for intercurrent effects; urotropin, camphoric acid, etc., for their antiseptic effect on the urine. There is no doubt as to the propriety of a bland, nutritious diet, bodily and mental rest, warmth, fresh air. Rectal flushings, vesical lavage may be in order. The occasional instillation of nitrate of silver in the posterior urethra may help to overcome the congestion; and the periodical introduction of a large steel sound, perhaps once a week, left in the urethra for ten minutes or so at a stretch, may assist to maintain the potency of the urethral canal and thus stave off the progress of the prostatic obstruction for a more or less indefinite period of time. In these cases, a cutting operation should not be attempted, not even systematic catheterization.

When the residual urine exceeds two ounces, systematic catheterization may become necessary. In spite of the fact that the dangers of infection come with the necessity of catheterization, the catheter is still the sovereign remedy for urinary retention, whether this retention be one of emergency or of gradual progress, initial or terminal, complete or incomplete. Catheterization is an art, and it is a pity that medical programs give so little space to it, when of all surgical arts catheterization is the one that must interest alike every general practitioner and every specialist, every medical man and every surgeon. But, perhaps, this is because, as I have been told once, catheterization is so simple that everybody knows it. It is true that the art of catheterization is simple; but its simplicity rests in a complexity of methods and multiplicity of indications, and if everybody knows this, not everybody practices accordingly. At the foundation of every surgical procedure in genito-urinary work, the catheter is para-

mount in the treatment of all the stages, except the very earliest, of prostatic obstruction of the bladder resulting in urinary retention. The possibility of infection is no contraindication, only a surgical warning to have the catheters aseptic, to use the proper catheter, to avoid trauma, and to keep the parts flushed and sweet as far as possible. The patient who is to use a catheter, must be taught not merely how to use it, but how to prepare it and how to keep it clean and ready for use. The criterion is to draw off the urine before pain or marked discomfort is felt, in order to avoid secondary congestion of the prostate and bladder with impending cystitis. Metallic catheters are for emergencies, the soft rubber Nelaton and, if the urethral canal is narrowed and distorted, the gum elastic elbow catheter of Mercier, coudée and bi-coudée, are for daily use.

When the residual urine does not exceed four ounces, a catheter should be passed once a day and the bladder flushed and emptied. If this is done towards or at bed time, it will have a marked beneficial effect on the nocturnal frequency and on the disturbed sleep that patients of this class commonly suffer from.

When there are six ounces of residual urine, the catheter ought to be used twice daily.

When there are eight or ten ounces of residual urine, the catheter ought to be used three or four times daily.

When spontaneous micturition is impossible, the catheter should be used every four hours or whenever there is desire for micturition.

It is wonderful how proper, systematic catheterization with boric acid lavage of the bladder and an occasional irrigation of the bladder with a weak solution of silver nitrate will reduce the degree of retention, overcome the most obstinate congestion and inflammation of the bladder, and prepare the patient for an unavoidable operation.

Irreducible retention is one cardinal indication for a radical operation of the prostate.

In spite of Young's contention that these patients require no preparation, I believe that every case of prostatic obstruction of the bladder fares better by proper preparation, which means principally a proper, systematic catheterization with vesical lavage until the amount of urinary retention is reduced to its minimum and the vesical mucosa has been relieved of the worst of its tension and congestion. It is in this line that the practice has grown to operate on the prostate suprapubically after a preliminary cystostomy. The opening of the bladder at one session relieves this organ of the harassing tension and congestion, and a prostatectomy performed at a subsequent session becomes a more simple matter for the patient to bear. The gravity of prostatectomy lies not in the attack on the prostate, but in the attack on the bladder. From the start, the prostatic obstruction manifests itself by symptoms of the bladder and not of the prostate. There is a functional and structural continuity between the prostate and the bladder, which shows itself nowhere so plainly as in patients suffering from prostatic obstruction. The bladder cannot perform its functions properly if the

prostate is diseased. The hypertrophied prostate becomes pathological only as it offers an obstruction to the flow of urine. The pathologically enlarged prostates also offer sooner or later an obstruction to the flow of urine, and thus add to their own pathology the pathology of the bladder obstructed to a greater or lesser degree. A cancerous prostate, though tending to invade the adjacent cellular and lymphatic tissues rather than the bladder, is nevertheless usually manifested by such a sudden onset and such rapid advance of urinary symptoms as to be quite characteristic. The shock of operation results mostly from incision of the rebellious bladder so that usually prolonged manipulation is, on the face of it, contraindicated. The bladder suffers more than the prostate and, in return, reacts gratefully to proper preparation. It is fortunate that immediate operation is hardly ever necessary, even in the most neglected cases of prostatic obstruction. In cases that are not neglected, retention may certainly be reduced and, in favorable cases, removed by systematic catheterization, vesical lavage, hygiene, and internal medication. Cases that have suffered neglect certainly demand preparatory treatment, for that neglect has usually engendered some form of urinary infection and intoxication and thus depleted the patient's power of resistance. The only absolute indication for prostatectomy is irreducible retention caused by prostatic encroachment of the urethra and bladder. Irreducible retention cannot be diagnosed without previous systematic catheterization, and catheterization should constantly be practiced so that it may form the preparatory treatment for unavoidable cutting operations.

Three kinds of cutting operations are now practiced for prostatic obstruction: incision for inflammatory exudative enlargements, cysts, median bars; excision for cancer; enucleation for benign growths and hypertrophies.

Of incisions into the prostate, prostatotomies, little need be said. Perineal prostatotomy and drainage without opening the urethra is the operation of choice for prostatic phlegmon, congenital and hydatid cysts. Endourethral prostatotomy, Bottini's glavanocaustic operation, is indicated in median hypertrophies, forming a distinct bar at the vesical neck as also in chronic inflammatory or non-inflammatory contracture of the vesical neck. If drainage is desired, the Chetwood modification of Bottini's operation, consisting of a perineo-urethral galvano-prostatotomy, may be adopted. But when a perineal section is to be made, the galvanocautery is not really required.

Cancer requires total excision of the prostate and its capsule, with the prostatic urethra, the seminal vesicles, the anterior two-thirds of the trigone and consequent anastomosis of the bladder and membranous urethra, a much more formidable operation than is comprised under the term of prostatectomy or enucleation of the prostate.

Partial excision of the prostate, the Belfield-McGill-Fuller ablation of prostatic outgrowths in the bladder, led to the present practice of prostatectomy, especially to Freyer's operation of total enucleation of the pros-

tate with its capsule through the suprapubic route, which is the operation of choice in all cases in which enucleation of the prostate is possible and is not contra-indicated. In all cases, in which on cystoscopic examination we find a well-defined outgrowth of one lobe or marked prominence of both lobes in the bladder, the suprapubic prostatectomy of Freyer is the operation of choice, because enucleation of the entire gland is possible, no matter what its size may be as felt per rectum. In the suprapubic operation, the entire prostate gland with its capsule is enucleated out of the enveloping sheath of recto-vesical fascia, the prostatic lobes are, so to speak, lifted and brought away from this underlying fascia, and the prostatic urethra itself is almost always removed. The size of the prostate offers no contra-indication to this operation. Those of very large size present some difficulties because of their impaction beneath the pubic arch and the great distance of the rectal aspect and the triangular ligament from the suprapubic incision. Small prostates offer difficulties because of distance from the external incision and lack of substance for counter-pressure from the rectum. But as long as a prostate shows the characteristics of a benign growth or hypertrophy per rectum, a more or less round shape, bilobed laterally, a well-marked furrow in the median line, smooth surface, lateral and antero-posterior mobility and within the bladder a well-defined outgrowth of one lobe or marked prominence of both lobes, the prostate is in condition to be totally enucleated and delivered through a suprapubic incision without division of the prostatic sheath of recto-vesical or pelvic fascia, which encloses the prostate like a collar, and holds it up with the neck and the floor of the bladder, a very important anatomical contrivance permitting the expansion of prostatic enlargements toward the urethra and the bladder.

Unlike suprapubic prostatectomy, perineal prostatectomy requires division of the prostatic sheath of pelvic fascia before the lobes can be peeled out. Perineal prostatectomy is the operation of choice for prostatic stone, small sclerotic fibrous prostates, prostatic enlargements complicated with deep urethral strictures.

Over a year ago, I outlined an extra-vesical method of suprapubic prostatectomy, the prostate to be reached through a small vertical incision made from the root of the penis upward. The recti drawn aside, the fatty tissue and peritoneal reflection drawn up on the anterior aspect of the bladder, the prostate and upper part of the urethra are exposed, and the lobes shelled out through an incision made over the most prominent portion of the prostate a little to one side of the median line. I succeeded in interesting some colleagues in this operation which would save the bladder but material has not yet been forthcoming. Stockum reports an operation of this kind in the *Zentralblatt für Chirurgie*, January 9, 1909 pages 41-72, which resulted in healing in 12 days and spontaneous urination. An extra-vesical operation, accomplishing the desired result of spontaneous micturition, would seem to meet more indications and, perhaps, no contra-indication.

Intravesical prostatectomy is contra-indicated in cases of extensive arteriosclerosis, a high degree of renal insufficiency, ascending or parenchymatous inflammation of the kidneys, complete atony of the bladder. But a careful preparation of these patients will very often permit operation where otherwise an operation would with certainty lead to a fatal issue. The ingestion of large quantities of water will fill the hard inelastic arteries and accelerate the circulation of the blood. Rectal enema of salt solution will aid renal elimination. Catheterization will remove residual urine and reduce the back pressure resulting from it, and maintain a state of requisite drainage, complete or partial, till all the most dangerous conditions of retention and cystitis are removed. Operation is absolutely contra-indicated in acute retention, in acute cystitis and epididymitis. While systemic condition make poor subjects for operation, improvement may be obtained by such measures as are indicated, medicinal, hygienic, local. The cause of death is usually renal insufficiency or an acute nephritis superimposed on an old kidney lesion, usually chronic nephritis.

IV.

Just one word on the question of postoperative drainage in these cases. Much has been said on this subject. It has been said that perineal prostatectomy affords drainage from a dependent point ; that suprapubic prostatectomy gives naturally poor drainage. In the perineal operation we open a very large cellular space and poor drainage of an infected bladder is more or less likely to be followed by septic cellulitis. Strange to say, the same argument has always been held forth for suprapubic drainage and the space of Retzius. Several times I have found that this is not particularly applicable here and that the drainage tube in a bladder, even when all and cautiously placed, acts as a disturbing foreign body. Twice I had occasion to remove it entirely within a very short time after operation and to find to my satisfaction that such removal changed what appeared to be a painful, down-hill state into a state of relief and undisturbed recovery. I was pleased to find Bevan express himself lately to the same effect. No drainage tube is preferable. I irrigate the bladder through the suprapubic wound with an Ultzmann or Janet syringe. This keeps the parts sweet. When indicated, I irrigate through a catheter per urethram, and later, when possible, without a catheter. The abdomen, around the suprapubic wound especially, is well covered with vaseline gauze and bandage, and whatever urine escapes from the wound will not irritate the skin.

With proper after treatment, which means irrigation of the bladder, urinary hygiene, systemic medication, ingestion of large quantities of water, infusion and enemata of physiological salt solution to overcome renal insufficiency, &c., the patient gradually regains the power of retaining and passing his urine naturally.

When he does this without the aid of a catheter as well as he ever did, the result may be considered a success.

If there is a relapse of symptoms, a contraction may have resulted at the seat of the operation. Contractions lead to strictures and usually result from incomplete enucleation. The same may be said of a remaining fistula. A complete enucleation of the prostate with its capsule and the enclosed prostatic urethra will remove all possibility of a remaining stricture or fistula. In perineal prostatectomies, a damaged rectum is possible and an added source of fistula. But, taken all in all, one must say that an unavoidable fistula is less dangerous to health and life and, therefore, much more preferable than an irreducible state of retention of urine due to obstruction of the vesical neck. The secondary effects are so dangerous and so progressive that the longer the retention is allowed to go on untreated the greater the danger to health and to life, and even when the retention is overcome, these effects require the most careful medical attention to ward off their destructive progress.

V.

In conclusion, it ought to be apparent—

1. That each prostatic case has, of necessity, its own diagnostic and therapeutic problem ;
2. That an early, exact and complete diagnosis is an absolute necessity if the patient's interests are to be fully safeguarded ;
3. That the correct and timely use of the cystoscope can not only do no harm, but can result only in good ;
4. That the cystoscope is the only means that can fully disclose what encroachment has been made upon the bladder and prostatic urethra, that can establish the true indications for operative and non-operative treatment and, therefore, prevent unnecessary operations ;
5. That no one routine method of treatment, operative or non-operative can be followed, but that all methods, medicinal, hygienic mechanical and operative, may at one time or other, singly or together, be indicated ; and
6. That an irreducible state of urinary retention is the cardinal, the only absolute, indication for operative interference.—*The Journal of the American Institute of Homœopathy*, March, 1911.

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ON THE COMPARATIVE VALUE OF SYMPTOMS
IN THE SELECTION OF THE REMEDY.

BY ROBERT GIBSON MILLER, M.B.

MR. PRESIDENT AND GENTLEMEN,—I have chosen as the subject of my remarks to-night the comparative value of different classes of symptoms in the selection of the remedy, for it is, I fear, a subject that has far too little attention paid to it. It is a common experience to find cases reported in our journals, presenting large and complex masses of symptoms, to which, as a whole, no remedy in the materia medica corresponds, and no reason being given why the remedy that proved curative was selected in preference to many other competing ones. We can learn little or nothing from these cases. Even when we study some of the model cases reported by masters in homœopathic prescribing, we are often utterly at a loss to understand why the curative remedy was selected, unless we understand the rules that led them to give a preference to certain symptoms and to relegate others to a very secondary place.

Hahnemann advises us to base the selection of the remedy upon the totality of symptoms presented by the patient, as they are the outwardly reflected image of the internal and invisible disease, and the only means by which we can truly apprehend this internal distunement of the bodily forces.

I do not at this point propose to go into the observations and

arguments that led Hahnemann to advise that the choice of the remedy should depend almost entirely upon the symptoms, to the practical exclusion of pathology. If these symptoms are to be our guides, what do we include in this term? Every deviation from perfect health experienced by the patient, or observed by others, including all disturbances of functions and sensations, all alterations in the external appearance of the patient, and also all probable causative conditions. As a rule, in an acute disease there is little difficulty in determining the totality of the symptoms, for the deviation from health is usually sharp and well defined. As an acute, supervening disease never forms a complex with a chronic one—the latter being suppressed until the former has run its course—care must be taken when ascertaining the symptoms of the acute disease to exclude from consideration the symptoms of the now latent chronic disease. According to Kent, at times some symptoms of the chronic disease may persist, and be active during the acute disease. Such symptoms are peculiar, because they have not disappeared and are often guiding in the choice of the remedy for the acute disease. But when we come to deal with chronic diseases the matter is more complicated, for we have to take into account not only the now present symptoms, which often show only a very partial picture of the disease, but must also include many former symptoms that are now not active; for even in those patients that have suffered for very long periods, and from many apparently diverse troubles, there always is method and order running through all their illnesses if only we can find the clue. While, theoretically, we should consider all the symptoms experienced by the patient since his birth, excluding those due to acute disease, yet the task is a very difficult one both for patient and physician, and we can only make very cautious use of these bygone symptoms. Even if we could trust to the accuracy of the memory of our patient, or his friends, these old symptoms can only be used with the greatest care, for so many of them may have arisen from faulty environment, the abuse of drugs, or the acquisition of some other miasm, that they would not

truly indicate the course and progress of the disease. This is also very often the case when no such question of old bygone symptoms is involved, and those who are guided in the selection of their remedies mainly by the symptoms are in special danger of overlooking such causes, and have to be perpetually on guard lest they fall into the error of ascribing to disease what is really due to other causes.

Dunham, in "The Science of Therapeutics," gives many instances where such mistakes have been made, and only a wide knowledge of drugs, of the habits of the people, and the special conditions under which many occupations are carried on, will enable us to avoid these errors. Such, for example, was the case of a young lady who, for a very considerable time, presented a perfect picture of the classical symptoms of sulphur, and upon whom that remedy, in all potencies, to say nothing of other remedies, failed to produce the slightest effect. It was finally discovered that she was in the habit of using sulphur to cleanse her teeth, and upon this being stopped the symptoms at once ceased. Or, the case of a maker of crucibles for casting steel ingots, who had suffered for seven years with all the symptoms of graphites gastralgia, and for whom that remedy did no good, until it dawned upon me that I had somewhere read that plum-bago was now being used for making these moulds.

When we have excluded all symptoms due to such causes, there is the vast number remaining which can only be ascribed to disease proper, and it is with these in particular I wish to deal to-night.

Theoretically, we endeavour to find a remedy whose symptoms correspond exactly—both as regards character and intensity—to those experienced by the patient. This can rarely, if ever, be done, and in chronic cases, at any rate, we have, as a rule, to make a selection from amongst the mass of symptoms, and to base the selection of the remedy mainly upon these. If it were necessary always to select a remedy that corresponded perfectly to every one of the symptoms, our already vast materia medica would be utterly inadequate, and we should require at

least 10,000 more fully proven drugs. Who would care to undertake the task of searching for a similitum in such a labyrinth? It is quite bad enough as matters are at present, but we must think of our remedies as complex tools, capable of doing many very different pieces of work, which to the uninitiated would seem to require many diversely shaped ones. Who have made finer cures than the old masters in homœopathy, with their very limited number of fully proven remedies? But they knew each one through and through, in a way that few of us do nowadays, and in their hands a comparatively few medicines were in the majority of cases sufficient for all their work. It was because they were able to comprehend not only the spirit of each remedy, but also those symptoms that characterized the patient. Following in their footsteps, we must also endeavour to learn to grade the symptoms according to their respective values, and not to act as mere symptom-coverers—an opprobrious name that has at times been only too well deserved.

In every case of disease there are always two classes of symptoms: first, those that pertain to the disease, that is, the common or pathognomonic ones; and, second, those that pertain to the patient; and in all advanced cases a third class that pertains to the ultimates or results of disease. To attempt to select the remedy in accordance with the first and last of these alone is simply to court failure in the majority of cases, for so many remedies will be found to correspond more or less closely to the first, at any rate, that, unless we have some other means of individualizing, we shall be quite unable—except by good luck—to select the correct remedy. Still less can we hope to find a sure basis if we depend upon the pathological condition, for very few drugs have had their provings pushed forward enough to elicit such effects, and consequently we would have to depend mainly upon such cases of accidental poisonings as happened to be available.

Dunham, writing upon this subject, points out that the drugs varying according to the size of the dose may produce three sets of symptoms, viz.: (1) The chemical; (2) the mechanical

or revolutionary, consisting chiefly in violent efforts on the part of the organism to eject from its cavities the offending substance; and (3) the dynamic, contingent on the vitality, or resulting from the relation of the peculiar properties of the drug to the susceptibility of the living healthy organism.

He still further subdivides the dynamic ones into the generic—or those common to all members of a certain class of drugs. As an example of this, arsenic in certain doses produces vomiting, diarrhoea, cold perspiration, cramps in the limbs; but cuprum, veratrum, antimonium tartaricum, which belong to the same group, produce identical symptoms.

The second section of the dynamic symptoms are the specific ones, or those that are peculiar to one remedy and serve to distinguish it from its relatives.

In the vast majority of poisonings little else is produced than the first two classes—viz., the chemical and mechanical—and the symptoms obtained therefrom are of little value in the great majority of cases we are called upon to treat; but our main reliance must ever be placed upon the symptoms that signify the patient, and Hahnemann directs that we should be particularly and almost exclusively attentive to those symptoms that are peculiar or characteristic of the patient, and not to those that are common to the disease. Kent, after many years' experience, states that he regards this advice of Hahnemann's to be the strongest thing that the master ever wrote.

In acute disease there is not much difficulty, as a rule, in recognizing the symptoms that are peculiar to the patient, for the symptoms usually appear in an ordinary manner, and the common or pathognomonic ones are well known; but when we come to deal with chronic diseases our difficulties are greatly increased, for they are often so complex in nature that it is not always easy to separate the symptoms that are peculiar to the patient from those that are common to the disease. In many old-standing chronic cases, especially those that have been long under allopathic treatment, these peculiar and characteristic

symptoms have at times so completely disappeared—or have been so utterly forgotten—that our difficulties are greatly increased; nay, it is even the case at times that the characteristic symptoms may never have existed, except in the patient's ancestors, and under these circumstances cure is practically impossible. It is, as if, during the exploration of some old city, a coin was discovered which, if we could determine the year of the king during whose reign it was issued, we would be in a position to fix an important date. If the coin were well preserved any skilled numismatist would promptly furnish us with all the informations we desired; but if it were greatly worn or eroded, while he might from the shape or composition of the metal be able to determine the dynasty under which it had been issued, it would be utterly out of his power to state the individual king, to say nothing of the year of his reign.

In this connection let us take a few examples of the symptoms that are peculiar to the patient as distinguished from those that are common to the disease.

The common or pathognomonic symptoms of dysentery are bloody, mucous stools, pain, and tenesmus. From these alone we can determine the group of remedies that corresponds in general to this disease, and in J. B. Bell's classical monograph on this subject over fifty remedies are mentioned; yet from these alone it would be impossible to discover the individual remedy for the case under treatment. If, however, the patient has much thirst, and every time he drinks he shivers, and each drink is followed by a loose stool, then these symptoms, being unusual in the disease, would consequently be peculiar to the patient and guiding to capsicum as the remedy.

Dyspnoea, oedema, and palpitation of the heart, albuminuria, are the common symptoms of many kidney troubles, and from them alone we cannot determine the curative remedy; but if we find in addition there is a strong craving for fat, intensely strong-smelling urine, and a sensation as if the urine were cold when passed, then these would be peculiar to the patient, and point to nitric acid as the remedy.

Or let us turn to characteristic modalities. In a case of spasmodic asthma an aggravation from lying down is so common as to be valueless in the individualizing of the remedy; but if we find there is great relief from lying down, as in psorinum, or from assuming the knee-elbow position, as in medorrhinum, then, these—being peculiar and characteristic—will be invaluable.

In hysteria we have an illustration of the danger of prescribing for the symptoms that are common to the disease, and hence not peculiar to the patient. It seems the most natural thing to gather up all the incongruous and peculiar symptoms that characterize this disease, and to prescribe for them; but when we realize that this incongruity is the very essence of the disease—in other words, is pathognomonic of it—we then perceive that we have been prescribing for the symptoms that represent the disease and not for those that characterize the patient. In such cases the true guides to cure, if discoverable, are to be found in the changes of desire, the aversions, the loves and the hates, and these are particularly difficult to find, for the hysterical patient conceals her real hates and loves and relates what is not true.

In the foregoing, stress has been laid on the supreme importance of paying the greatest attention to the symptoms that are peculiar to the patient, but it would be foolish to ignore the symptoms that signify the disease. They must indeed be taken into consideration, but subsequent to, and of much less value than, those that are predicated of the patient. In very large number of cases no one remedy corresponds to all the peculiar symptoms, but three or four seem to have equal numbers of them, and of approximately the same value. In such a state of affairs the remedy that has also the common symptoms best marked must prevail. It must ever be kept in mind that there must be a general correspondence between all the symptoms of the patient and those of the remedy, and that however helpful the peculiar symptoms may be in calling attention to certain remedies, yet they are not the sole guides; for, after all, it is the totality of the symptoms that determines the choice.

It is true that at times a brilliant cure has been made by a remedy that corresponded only to those symptoms that were peculiar to the patient and was not known to possess any strong resemblance to the common symptoms of the disease; but even in such a case it is almost absolutely certain that further provings will show that the remedy has the common symptoms also. But when using these peculiar and characteristic symptoms as the main guides in the selection of the remedy, it is important to bear in mind that they must be equally well marked both in patient and in remedy; in other words, no matter how peculiar and outstanding a symptom may be, either in the patient or in the remedy, unless it be of equal grade in both, we must pay little heed to it. For example, if a patient experiences occasional and slight heat in the soles of the feet at night in bed, this symptom would not be of much importance in selecting sulphur as the remedy, because in that drug this symptom appears in such a vigorous and outstanding way that the provers declare that their feet burn at night as if they had been on fire. Or take a case of rheumatism, markedly aggravated in dry weather and better in damp; in such a case the selection of phosphorus as the remedy could not be based upon this modality, for, while phosphorus has it, it is only in the lowest degree. Even in a case with, let us say, ten peculiar and characteristic symptoms, of which one remedy has eight, but of a very low rank, while another has only five, but of high rank and corresponding to the rank of the symptoms as experienced by the patient, in such a case it is very improbable that the first medicine will prove to be the curative one, and the second is much more likely to be so.

It is this question of the rank of symptoms that is the great objection to the numerical method of selecting the remedy. It seems to have fascinated some minds, for, while it is laborious in the highest degree, it seems to promise certain and exact results, but medicine—even homœopathic—is not yet an exact science, and even when we have perfected our armamentarium it is extremely improbable it ever will be. Consequently all

such mechanical methods are to end in failure, for quality will ever be of infinitely more importance than mere quantity.

In opposition to this numerical method, some physicians have gone to the other extreme, and have been content to be guided in the selection for the remedy by one or two peculiar and outstanding symptoms, practically ignoring all the others, because they have overlooked the fact that—unless there be a general correspondence between the symptoms of the patient and those of the remedy—it is not reasonable to expect a cure. This so-called “keynote” system of prescribing is very attractive, as it seems so easy, and saves all the laborious comparison of competing drugs that is involved in the numerical method, and also because by means of it many brilliant cures have been made; but it is from its very nature a wrong method, and in the great majority of cases is doomed to failure, because it ranks one or two symptoms very high and practically ignores the others.

Having discussed the difference in value, so far as the selection of the remedy is concerned, between the symptoms that signify the patient, and those that signify the disease, we would turn to the other great division of symptoms—viz., the general and the particulars.

The general symptoms are those that affect the patient as a whole and, because of this very fact, are naturally of higher value than the particulars, which only affect a given organ. What the patient predicates of himself is usually general, as when he says: “I am thirsty,” “I am sleepy”—thereby indicating that his whole being is so affected, and not merely one or two particular organs. So much higher may a general symptom rank that if it be a strong and well-marked one it can overrule any number of even strong particulars. Let us take a case of gastric catarrh, with semi-lateral headache, roaring in the ears, greasy taste, aversion to fat and butter which aggravate greatly, fulness and pressure of the stomach after eating, flatulence, chilliness, vomiting of the food. So far pulsatilla and cyclamen compete equally; but if we have in addition diarrhoea only at

night, nausea from hot but not from cold drinks, palpitation when lying on the left side, then the balance would turn towards puls. But, if we find that the patient has the greatest aversion to the cold open air, and is always aggravated by the least cold, then this one strong, general symptom would overrule the marked particulars that puls. alone had, and declare plainly that puls. could not be the remedy notwithstanding the fact that it alone had the three strong particulars. But, on the other hand, a number of strong particulars must not be neglected on account of one or even more weak generals. Let us take another case of gastric catarrh, with severe pain over the right eye, bitter eructations, pain in the stomach—worse from cold and better from hot drinks, one cold and one hot foot. So far lycopodium and chelidonium correspond about equally to the case; but if there is in addition a constant pain under the inferior angle of the right scapula, a yellow-coated tongue with indented margins, and clay-coloured stools, no one would hesitate to give the preference to chel. But if on still farther examining the case, we find that the patient always feels worse all over—though not in a very marked degree—after eating, also that he feels better moving about than when sitting, these generals would be against chel. and in favour of lyc., but they are only weak and not strongly-marked generals, and consequently should not be allowed to overrule the strong particulars that indicate chel.

Amongst general symptoms is to be included the mental state, which, reflecting the condition of the inmost part of man, is bound to be of the utmost importance, and—as Hahnemann so strongly insists—must always, if well marked—take the highest rank in the selection of the remedy. These symptoms are naturally the most difficult to elicit, for people, as a rule, shrink from revealing their inmost thoughts and motives, their hatreds and yearnings, their evil tendencies, and their delusions, &c., and it requires the greatest tact and a full knowledge of human nature before we can hope to win the confidence of our patient and so understand his deepest thoughts.

Of course, we are all aware of the value of the more common

mental states, and these influence us, consciously or unconsciously, in the choice of our remedies. We all recognize, for example, the fustidiousness of arsenic, "the gentleman with the gold-headed cane," the irritability of bryonia, chamomilla, and nuxvomica, the gentle, yielding lachrymose puls., the ever-varying moods of ignatia, the hauteur of platina, the lack of self-confidence of silicea; but there are many less apparent conditions, which have to be deeply probed for, though when found are invaluable. Such is the presentiment of death of apis., the lack of natural affection of sepia and phosphorus, the strange impulses to kill those dearest to them of mercurius and nux., the suicidal promptings of china—not open and obvious like those of natrum-sulph, but hidden, shamefaced, and mixed with fear. These latter, in the early stages, few patients care to allude to, yet their value to us is inexpressible. Even amongst the mental symptoms there are various ranks, and consequently they vary greatly in their value. All symptoms of the will and affections, including desires and aversion, are the most important, as they relate to the inmost in man. Of less value are those relating to the intellect, while those of memory are to be ranked lowest of this group.

Amongst our other generals are the effects of sleep and dreams such as the aggravation after sleep of lachesis and sulphur, the aggravation from loss of sleep of cocculus, and the great relief from sleep of phos. and sepia.

Again, how often has the study of the dreams revealed the hidden key to the remedy! For in sleep man is off his guard and his subconscious self can assert itself, and under such circumstances the veil is often lifted a little, so that we are able to apprehend in some degree the deep and hidden mysteries of that disordered life we call disease. Of course, such dreams must be regular and persistent to make them of value, and great care must be taken to eliminate the effect of all external influence.

I recall a case of aortic aneurism, giving rise to much pain and many other pressure symptoms. The patient had not the slightest idea what his disease was, yet he dreamed night after

night of pools and seas of blood, and so distressing was this that sleep was one wild nightmare. The other symptoms were valueless so far as the selection of the remedy was concerned; but, taking the dreams as my guide, I gave *solanum tuberosum* ægotans, which completely removed the dreams, and so relieved the pains that he went down to his grave in peace.

But one grand general—viz., the effect of different temperatures upon the patient as a whole—is often of the greatest service in calling our attention to special groups of remedies and excluding other groups, so that the labour of selection is thereby greatly lessened. It is by no means always an easy general to use in fact, I am more careful in questioning patients with regard to this than with regard to anything else. How often, in response to our question as to how they are affected by heat and cold, they will reply: "Oh! I can't stand heat!" But on inquiry you discover that they hate cold, but cannot stand a close, stuffy place—or perhaps they may say so because they are worse in summer—which is not necessarily the same as aggravation from heat, for summer, in this climate at any rate, means more than heat.

Another frequent source of error is the tendency to mistake any undue readiness to perspire as an indication that heat aggravates. On the other hand, many confuse an undue tendency to catch cold with aggravation from cold; but when we have eliminated these errors and find the patient markedly aggravated as a whole by heat or cold, we are greatly aided in our choice of remedy.

This question of temperature is often very valuable when the body as a whole is markedly affected by one temperature, and some special organ by the opposite; for example, we find a general shrinking from cold under ammonium carb, and *carbo vegetabilis*, yet their respiration is relieved by cold air. *Cycl.* has the same aggravation, except with regard to its headache and catarrh; *magnesia phos.*, except for its cough and some headaches; *china.*, except for its stomach symptoms; or

phosphorus, except for its headache and stomach symptoms. Or, as a patient suffering from headache and general rheumatism of the body remarked, if he could only have his body in a bath and his head in an ice-tub, he would be supremely happy. Conversely, the general aggravation of heat of lycop., except for its stomach and some rheumatic symptoms or secale except for some headaches and neuralgias, illustrates the value of this general. The exquisite sensitiveness of the mercurial condition to both extremes of temperature, only finding comfort at a medium temperature, is doubtless known to all of us, and must often have served us in good stead when the other mercurial symptoms were absent.

There is little need to call attention to the general effect of the various weathers, but many a valuable hint is obtainable from them, not only in a positive but also in a negative way. In many conditions such as rheumatism, where we expect as a rule to have an aggravation from weather changes, the absence of such an aggravation becomes peculiar and characteristic, and enables us to throw out of consideration whole groups of remedies. For example, where change of weather does not influence a rheumatism, we can safely exclude dulcamara, nux. moschata, phos., ranunculus bulbosus, rhododendron, rhus, sil., tuberc.; or, if wet weather does not affect, we can eliminate calc., merc., natrum carb., natr. sulph. and ruta. Such negative conditions are not sufficiently made use of—for, while the mere absence of particular symptoms that strongly characterize a remedy cannot be relied on as excluding that medicine, yet when strong generals that characterize the remedy are absent we can, with a fair degree of confidence, exclude that remedy, simply because each drug is a unity, and such characteristic generals are their very web and woof.

Amongst the generals must be included the influence of the various positions, such as the great aggravation of most symptoms by standing of sulphur and valerian, the aggravation of lying on the right side of merc., the peculiar aggravation of phos. when lying on the left, yet with aggravation of the head

symptoms when lying on the right. To be of any value as a general symptom, the patient as a whole must be markedly influenced by these, and if only one organ is so affected they can only take low rank, being particulars. The tendency of disease to affect particular parts of the body is often well marked and may be of general considerable value. Such, for example, is the semi-lateral nature of many illnesses that require *alumina*, *kali carb.*, *phos. acid.*; or, if the right side is mainly affected, *apis*, *bell.* and *lyc.*; or, if it be left-sided, *argentum nit.*, *lach.* and *phos.* Again, how often has the oblique appearance of symptoms led to the choice of *agaricus* or *asclepias tuberosa* as the remedy, and even more frequently the appearance of symptoms on alternate sides has led to a cure by *lac. caninum*.

But let us consider how profoundly time influences our diseases, and how common it is to find the symptoms aggravated regularly at particular hours. Here, indeed, is a valuable and great general whose proper use will enable us many a time to decide which is the true remedy. It may be the morning aggravation of *chel.*, *natr. mur.* or *nux.*, or the evening one of *bry.*, *bell.*, or *puls.*—perhaps coupled in the latter remedy with the exceptional aggravation of the stomach symptoms in the morning. Or if we find the cases characterized by periodic return of the symptoms—whether it be daily, as in *aranea*, or on alternate days, as in *chininum sulph.* or *lyc.*, or every two weeks, as in *ars.* or *lach.*—we here, again, have a general of the greatest value. But it is worthy of note that the less the disease that happens to be under consideration is itself normally characterized by periodicity, the more does this periodic return of symptoms indicate special remedies which have this characteristic in a marked degree. This is well exemplified in the case of *ague*, which is normally characterized by the periodic return of the paroxysm at fixed intervals, due as we are all now aware, to the segmentation of each variety of the parasite at definite times; but the mere fact that this periodicity is common to the disease, and hence not peculiar to the individual patient, has led the most successful prescribers for this disease to base their prescription on other

factors that are present rather than on the periodicity, though of course by no means excluding it from consideration.

The various cravings for, and aversions to, various substances are as a rule general symptoms, for they depend upon some deep need in the body as a whole, and if outstanding and definite, must always take high rank. It is easy to understand many of these, such as the aversion to fat of puls., for it also disagrees, or perhaps also the craving for salt of natr. m.; but the reason for many others is utterly beyond our ken at present. For example, an intense craving for pork in a case of rheumatoid arthritis, which presented no symptoms beyond those common to this disease, put me upon the track of crotalus and led to the cure of the case, though the patient had been bedridden for over six months.

One more of these general symptoms I would allude to—viz., the influence of eating. Of course, so far as it affects the stomach directly, it is only a particular, and we do not as a rule find it to be of much help in the selection of the remedy; but when the man as a whole is thereby influenced, and states that he feels better, or worse, all over, by eating, then it becomes a general of high rank. Especially is this the case when symptoms in parts far distant from the stomach are so influenced, such as the aggravation of the pains in the limbs of indigo, or the amelioration of natrum carb., or kali. bichromicum. The effect of special foods is at times general, affecting the man as a whole; but as a rule they only affect the digestive organs, and in that case are merely particulars. It is through forgetting this distinction that all of us at times rank their influence too high, and are disappointed when remedies selected more or less in accordance with them fail to cure the case.

The special senses are often so closely related to the whole man that many of their symptoms are general. For example, when the patient states that the smell of food sickens him, this is a general; but if he only experiences a subjective, offensive smell in the nose, this would merely relate to the one organ

and consequently would be only a particular, and of comparatively low rank.

General symptoms are not always recognized at once to be so, but on examining a series of particular organs we find that a symptom or modality runs so strongly through them all that it may be pedicated of the patient himself. Here we have a general made up of a series of particulars. For example, if we take a case in which, wherever the pain happens to be felt, whether in head, or chest, or limbs, there is relief from lying on the painful side, this becomes so common as to characterize the patient as a whole, or if we find that in all organs and tissues affected, the pains are boring from within outwards, as is found under *asafœtida*, then this symptom can be raised from being an ordinary particular to a general of low rank; or, if the pains, wherever they may chance to be located, are always associated with numbness, as in cases requiring *plat.* or *cham.*, then this may also be regarded as a general, though, of course, of a comparatively low rank. But there is a real danger of overdoing this dependence on generals in the selection of the remedy, and a glaring example of this is seen in Beoenninghausen's "Pocket Book." In this he overdid the generals, for he generalized many rubrics that were only particulars. For example, writing is a rubric of particulars, and in no instance is the patient himself worse from writing; but in some cases it is the eyes, from looking; in others the hand, from exertion; or in others the back from sitting bent. If we are searching for the remedy for a headache aggravated by writing, a rubric composed after this manner would be useless. But the rubric aggravation from motion is on quite a different footing, for, if we have a case requiring, say, *bryonia*, we find so many particulars aggravated by motion that it appears that the very patient himself is worse from motion, and consequently in this case motion is a general.

But there is one other general—the greatest of them all—which I must not omit, for it is created by the blending of all the generals and particulars into one harmonious whole. For

lack of a better word we speak of, let us say, the "sepia" constitution, meaning thereby that special diseased condition of mind and body for which that remedy has so often proved itself curative, that we come to look upon it almost as an entity. At times it is plainly discernible by all, and capable of being described in words, such as the leuco-phlegmatic constitution of calc., the tall, thin, narrow-chested one of phosphorus, or "the lean, stooping, ragged philosopher," as Hering called the sulphur patient; but far oftener it is something much more subtle, such as that of arg. nit., with its fears and anxieties and hidden, irrational motives for all it does. To very few of us is it given to penetrate into these secrets and to understand that almost indefinite something which often lies behind the mere symptoms, modifying and characterizing them all, and so becoming the governing element in the whole case. The masters in our art are those who have had the power to understand this great general, and we stand amazed at their skill in penetrating right into the heart of the most complex cases and evolving order and consequent cure out of seeming chaos.

But while the general symptoms are of the highest rank as a rule, simply because they relate to the man as a whole, yet we must on no account undervalue the particulars, and, in fact, many cases seem to be composed only of particulars, and have few or no generals of any importance. In such a case, where no one remedy corresponds to the case as a whole, we must base our selection upon those particulars that are most characteristic and peculiar, for it must be borne in mind that both generals and particulars may either be characteristic and peculiar, such as, say, a vague aggravation from cold and damp, an indefinite depression of spirits, or an irritability without any qualifying conditions, or not of much intensity, then the characteristic particulars must lead.

There is one matter in connection with prescribing the particulars that may give rise to a difficulty in selecting the remedy. In alternating complaints, such as of eye and stomach, we may find that, say, euphrasia is more sharply related to the

eye-symptoms than the deep-acting remedy that best fits the whole case, and that puls. corresponds to the stomach ones better than the deep-acting one does; yet we must ever remember that there is one deep-acting remedy that is more similar to the whole patient than these special remedies, because it corresponds better to the general symptoms, I have previously quoted Hahnemann and Kent with regard to the importance of paying heed mainly to the symptoms that are peculiar, but this is only one aspect of the truth, for the highest rank of all belongs to those symptoms that not only are peculiar but are also general. A very good example of this is a case with very high fever, let us say, of 105°, yet without the least thirst. Here we have without doubt a very peculiar symptom, for the absence of thirst with such a temperature is a most unusual thing, and this thirstlessness is a general, for it is the whole man that is thirstless. Of course, if we had only temperature of, say 101°, this symptom would not be specially characteristic, and consequently of comparatively low rank.

But before we pass from the consideration of particulars, I would call attention to the fact that common particulars may in certain circumstances assume a comparatively high rank. When two common symptoms which, if they appeared alone, would be of little importance, yet when associated at once become of considerable value—the coryza with polyuria of calc. is a good example of this. In this connection it is worth noting that a remedy can cure groups of symptoms, even where they did not appear as concomitants in the proving; and this is even the case when the components of the group were observed by quite separate provers. Kent, in his great repertory, has left out the majority of concomitants, and has only retained those few that abundant clinical experience has demonstrated to be frequently associated.

Other examples of this raising of the rank of common symptoms are where the common symptom is associated with a peculiar modality, such as the chilliness of puls., worse near the fire, or a special localization may emphasize a quite common

symptom, such as the aching pain at the inferior angle of the right scapula of chel., or finally, the mere intensity of a common symptom such as the overwhelming sleepiness of *nux m.* gives it a value that otherwise it would not possess.

Ranking close behind, or even at times taking precedence of the peculiar and general symptoms, must be placed the last-appearing symptoms of a case. These symptoms, to be of any real importance, must of course be outstanding and definite, and if so they are always of the first importance in the choice of the remedy. So much is this the case that where no remedy can be discovered that corresponds to the case as a whole, it is at times necessary to be guided almost exclusively by them. When so prescribing, it is not to be expected that the remedy will influence the case very deeply, or cause any markedly curative results; but it will modify the symptoms and open up the way for other remedies.

The foregoing refers to the symptoms that have been the last to appear, before homœopathic treatment was instituted; but even when the appropriate homœopathic remedy has been given and modified the case, and new symptoms have appeared, the same law holds good. Hering, however, cautions us to note that these new symptoms will generally be found amongst the symptoms of the last given remedy, but only of low rank and not guiding in the choice of the second remedy. These new or last-appearing symptoms may be old ones which had disappeared many years ago and have now returned through the action of the first remedy. Accordingly, before using them as guides in the selection of the second remedy, we must have patience and make sure that their return is permanent, and not merely a temporary reappearance while on the way to final extinction.

Another very important rule of Hering's, the observance of which will often prevent many mistakes and save much study, is—that the second remedy must bear a complementary relation to the first, and hence the last remedy that has ACTED, either homœopathic or allopathic, forms one of the most important guides in the selection of the second. The knowledge of this

rule is a great time and trouble saver, for in the majority of cases a reference to the tables of related medicine would enable us to select with ease the remedy that is to follow.

Towards the beginning of this lecture, I made passing mention of the value of old symptoms which had long ago disappeared, pointing out that for many reasons they were often of very uncertain value; but while it is seldom advisable to give them any very high rank in the selection of the remedy, yet they are of the utmost value in confirming the choice of remedy, or in differentiating between competing remedies selected in accordance with the now active symptoms. As an example of this, Kent mentions the case of a man who had long suffered from neuritis of the limbs, and whose present symptoms did not point decisively to any one of five or six competing remedies. It was discovered that in infancy he had been affected by eczema capitis, very similar to that caused by mezereum, one of the competing remedies, and on examination of the pains in the limbs produced by that remedy it was found that they closely resembled those now experienced by the patient. This remedy proved curative and reproduced the original eruption.

Dunham's well-known cure of deafness by the same remedy is another example of this use of old symptoms.

In the cases just mentioned, the diseases cured were not characterized by any marked pathological changes, but even in cases where these changes have become quite definite, it is useless in the majority of cases to prescribe upon the symptoms that now present themselves. We must here also seek to discover the primitive symptoms that the patient experienced long before any definite pathological change took place, and though the task, as I stated, is difficult, yet we can often obtain enough data upon which to base our prescription.

I need hardly say that no one, even when he has been able to obtain the fullest and most accurate description of these old symptoms, expects to be able to cure diseases that have advanced so far as to lead to practical destruction of organs and tissues. It is only the beginnings of such processes that are amenable

to medicines, so far as positive cure is concerned. Even in comparatively recent and uncomplicated cases of chronic disease, when the symptoms have been suppressed and the whole character of the disease changed, the symptoms that now present themselves must in the great majority of cases be our guides, though at times it may be necessary to select from amongst the competing remedies one that is known to have an antidotal relation to the suppressing drug. This is not, however, invariably the case, and it is at times necessary to give the original symptoms the higher rank and to be guided by them, to the exclusion of those now present. As an example of this, an otherwise healthy young man, who had suffered for over a year from sciatica, presented himself with stitching, cutting pains in the calf, worse at night, better from heat, worse in motion, relieved by flexing the limb. Coloc. and other drugs failed to give relief. It was found that the disease, which was originally located in the upper part of the nerve, had been vigorously treated by external applications, with the result that not only was the situation of the pain altered, but its character and modalities had been completely changed. The original pain was of a tearing nature, and was greatly aggravated by sitting—not quite so severely felt while walking—and there was almost complete relief when lying down. Ammonium mur., selected in accordance with these old symptoms, promptly cured.

To-night I can only make passing reference to the so-called primary and secondary effects of drugs, to which some good prescribers have assigned different values in the selection of the remedy. So far as my experience goes, it does not seem to matter in what order the symptoms may appear in a proving—if the remedy can produce them it will also cure them, irrespective of their position in the disease, and consequently so far as rank is concerned we cannot differentiate between them.

I stated at the beginning of this lecture that Hahnemann insisted that we must be guided in the choice of the remedy

almost exclusively by the symptoms, to the practical exclusion of pathology; but I think there is a good deal of confusion with regard to this matter. So far as I can see, Hahnemann did not object to the use of the pathological changes as guides for theoretical reasons, but only for practical ones. It is true that to a limited extent it is practical to use pathology as our guide, and we all do so use it. Whenever we have to prescribe for eruptions or ulcers—which are, after all, pathological changes—we do not hesitate to be governed by anything that is peculiar or characteristic about them, such as their colour, shape, and position, because by means of these peculiarities we can differentiate. But when we come to deal with gross pathological changes in the deeper organs, we meet with two difficulties. In the first place, we are unable in the living patient to determine those minute differences—though doubtless they do exist—which, if discernible, would enable us to differentiate; and, in the second place, very few of our remedies have had their provings pushed far enough to cause corresponding pathological changes. These, I take it, are the practical reasons that led Hahnemann to ignore pathology; and though our knowledge of this subject has enormously advanced since his day, his reasons still hold good. But we cannot, even in the selection of the remedy—to say nothing of its absolute necessity in all questions of diagnosis and prognosis—ignore pathology, for without it we cannot understand the true course and progress of a disease. Only by means of it can we know the symptoms that are common to the disease, and hence those that are peculiar to the patient. We also thereby know at certain stages of some diseases that no matter how similar the symptoms produced by certain remedies may appear to those of the patient, yet that owing to the superficial character of their action, it is not possible for them to prove curative. For example, in pneumonia, in the stage of exudation, while the symptoms may apparently call for acon., we know that this remedy, owing to the superficial nature of its action, cannot produce such a condition, and closer examination will reveal that some deeper-acting remedy, such

as sulphur or lyc., is needed. Pathology enables us to decide when new symptoms arise whether they are due to the natural progress of the disease or to the action of the remedy. We must clearly understand that it is the patient that is curable, and not the disease, and without a proper understanding of pathology we are liable to err. Take a case of inflammation of a joint that has gone to ankylosis—the suitable remedy will cure the inflammation, but will be powerless to break down the adhesions, and surgical aid must be sought. The same holds good with regard to tumours, for when the patient is cured, the tumour will cease to grow and perhaps may be absorbed, but very often it persists, and must be removed by the knife. Pathology also warns us that it is dangerous to attempt to cure certain conditions of disease, such as advanced phthisis, or deeply situated abscesses, or where foreign bodies are encysted near vital organs. In such cases Nature can only cure by ulcerating out the foreign substance, and the exhaustion entailed by such an operation is often fatal. Of course in such cases, if a surgical operation is not deemed advisable, we can do much to relieve by means of short-acting remedies which have no tendency to excite Nature to get rid of the foreign body or dead tissue by suppuration.

I now come to a matter which has given rise to the sharpest controversy in the past, and which many have absolutely rejected, viz., Hahnemann's doctrine of psora. I would not have alluded to it this evening, after having spoken of so many things that I cannot expect all to accept, unless it had been that the discussion of the comparative rank of symptoms would not be complete unless this matter was considered. All are agreed, at any rate, on the existence of the two other chronic diseases, viz., syphilis and sycosis, and I would like to indicate before closing, the views of the man who more than anyone—even more than Boenninghausen—has elucidated the course and progress of these diseases—I mean of course James T. Kent. Kent holds that these chronic diseases may exist either in an active or a latent condition, and may present themselves in three ways, viz., as a single miasm; two or three miasms

co-existing or separate, but only one active at a time ; two or three miasms forming a complex. But, to come to the point we are interested in this evening, both Hahnemann and Kent teach that we must attack the one that is uppermost at the time and ignore the symptoms of those that are latent, except in the last monstrous phase, where two or three form a complex, which is a rare thing, and seldom brought about except by the prolonged abuse of unsuitable remedies. Where two miasms, say syphilis and sycosis, co-exist, it is not uncommon to find them alternating, though only one is active at a time. In such a state of affairs we naturally will select the remedy solely in accordance with the symptoms of the now active miasm, and ignore those of the one that has become temporarily latent—in other words, only the symptoms of the active one have any value in the selection of the remedy that is required at the moment.

Such gentlemen, is a very imperfect sketch of the rules that must guide us in determining the comparative value of the different classes of symptoms, a matter of the utmost practical importance in connection with the problem of the cure of complex chronic diseases.

And it is solely by our success in the treatment of this class of disease that we can hope to convince our brethren of the old school that the true and only law of cure is that of *similia similibus curantur*.—The *British Homœopathic Journal*, February and March, 1911.

CLINICAL RECORD.

Foreign.

CASES FROM PRACTICE.

By DR. T. G. STONHAM.

Case 1.—J. L., female, married, aged 41.

Had rheumatic fever at sixteen; was laid up for several months with it; has had rheumatic swelling in the knuckles on and off ever since.

Three months ago, she was confined with a dead child at full time. Only one child besides, who is living, and five years of age. She lost much blood in her late confinement. The catamenia returned this week, three months after the confinement, were moderate in quantity and lasted three days.

Appetite poor. Tongue coated with a slimy white fur; bad taste in the mouth. Throat dry. Bowels regular.

Two months ago, she began to have pains in the left side of the head, starting in the left temple, and darting across the top of the head. A sensation of cold water on the vertex is associated with the darting pains and the eyelids feel as if they must close. The headache is worse in the morning soon after getting about, and better towards evening. The darting pains seem to take her senses away, and the only way she can get ease is to wrap the head up in flannel. When the head gets quite hot and perspires the pains are better. She is very irritable and must get away by herself, when she has the pain, and lie down. Feet very cold and clammy. The feet used to perspire offensively before she had rheumatic fever when she was sixteen years old, but they have not done so since.

February 23th, 1907.—*Silica* 30. m. iii. night and morning.

I saw no more of this patient till May 2nd, two months later, when she returned to be treated for a cough. She then informed me that the headache disappeared almost immediately on taking the medicine.

Case 2.—Miss P., aged 38, housekeeper.

Came to me on June 26th, 1903, complaining of bilious headaches, one of which had just passed over. Her mother was also subject to bilious headaches, and she herself had always had them at times, formerly only occasionally once in three or four months or longer, but after going to live at Brighton ^(sea-side) some years ago, she had 'them

every month. On removing to London they became better again, and she would go without a headache for several months, but latterly they have recurred every month, and during the last six weeks every fortnight, and the head is not in a normal condition between times. A headache always occurs before, during or just after a menstrual period. The periods are regular to the day, last four days, are normal in amount and are accompanied by little or no pain. There is some tenderness in the anterior axillary folds a few days before the period and often also much depression of spirits. The patient is below the middle height, of dull complexion, and the complexion becomes duller and rather muddy looking before the headaches.

The headaches may commence at any time of the day, and come on gradually, usually commencing in the left temple or above the left eye. They are of a dull pressive character, and as they increase in intensity they extend to the side of the head and the neck, reaching down to the level of the seventh cervical vertebra. After some hours the attack culminates in bilious vomiting of very bitter fluid, after which relief comes speedily. She is weak and prostrate for a few hours, but is then well till the next attack. The pain is associated with a heavy feeling in the eyelids with desire to close the eyes and a sensation of drowsiness. She may fall asleep, but on waking the pain is still present, and only the onset of vomiting puts an end to it. During the attack she likes to lie down and press the head into pillows; she is worse for any movement, noise or light. Stooping causes a feeling as if the top of the head would come off; rising to the sitting position brings on throbbing and giddiness, and inclination to vomit. She is not thirsty. The action of the bowels and the quantity and character of the urine are normal, both during the attacks and in the intervals. There is no abdominal pain, except the strain of retching.

The choice of remedy lay between *Nat. Mur.* and *Bryonia*. The modalities of the headache pointed strongly to *Bryonia*, but the time of their occurrence, their evidently constitutional character, and the fact that they were made worse by living at the seaside led to the selection of *Natrum Muraticum*, which is so like *Bryonia* in many of its characteristics, and may almost be regarded as a chronic *Bryonia*.

Natrum Muraticum C.M. (Nash) unit dose was given (June 26th, 1908), with directions that it was to be repeated after a fortnight.

Patient did not come again till February 12th, 1909, nearly seven months later. She then told me she did not think the headaches had been any better, but they had not come oftener than once a month. They still came about the time of the period. During the attacks she likes to sit up quite still with the head raised and the eyes closed. The face is pallid with the headache, and she feels cold down the spine. The scalp is tender and the hair dry, and falls out after the attacks. She said the only effect she could definitely trace to the medicine was that about two hours after taking each of the two doses she had a pain in the lumbosacral region as if sprained, which lasted for three or four hours. It was a pain which she had never had at any other time. She said, on further questioning, that though her headaches were always worse at Brighton or Margate they were better at Yarmouth. Fourteen years ago she had rheumatic fever, but made a good recovery without cardiac complication. She takes three cups of tea daily, and was vaccinated when five years old, but not since. Her headaches commenced at puberty. The *Natrum Muriacum*, though well indicated and though it had produced the strained pain in the back after each dose, a definite *Nat. Mur.* symptom, had yet failed to cure the headaches. I thought that perhaps her tea drinking, or possibly her former vaccination when a child, hindered the action of the remedy, and with the view to removing the antagonisms gave her one dose of *Thuja C.M.* (Nash).

March 2nd, 1909 (one month later), she writes: "I had a slight headache at the usual time, not very bad, and no sickness. I have been very well since, so I did not take the powders (I had given her one or two powders of *Thuja C.M.*, with directions that one was to be taken after a bad headache, but not unless it was severe). If I get the headache and sickness this month I will take them and let you know the result."

June 9th, 1909 (three months later), she writes: "Soon after I last wrote to you I had a very bad bilious attack at the usual time. I took one of the powders (*Thuja C.M.*), as you advised. For a fortnight I was not well and had a feeling of sickness, headache, and the glands were sore, but I may have got a little cold at the time. The next month I had headache but no sickness, and this month I have been quite free from both sickness and headache."

January 2nd, 1911 (eighteen months later).—She has continued free from headaches ever since.

Case 3.—E. O., aged 7. Has had Scarlet Fever, diphtheria,

measles, whooping cough, chicken pox, and an abscess in the groin. During the last three weeks, has complained of cough and shortness of breath, vomiting and expectoration. Physical examination revealed dullness and deficient breath sounds over the upper lobe of the right lung with considerable flattening of the chest wall below the right clavicle.

October 13th, 1910.—He was given one dose of *Tuberculinum* (Koch) 30., to be taken at bedtime, to be followed the second day afterwards by *Calcarea phosphorica* 6x, tab. i, t.d.s.

October 20th.—Sickness and diarrhœa gone; still short of breath. His mother mentioned that he came over very queer the day after taking the *Tuberculin* dose, he seemed very feverish and she kept him in bed all day. In the evening he became delirious, was continually jumping up and kicking, or falling out of bed; could not get to sleep. Finally he broke out into a profuse perspiration. On the next morning he had a sore throat, but was otherwise better and continued to improve through the day, and had been getting better ever since. Repeat *Calc.-p.* 6x.

November 3rd.—Complains of cough during the night, and spitting up large lumps of yellow phlegm. Short of breath on walking. Another dose of *Tuberculinum* 30 was given, and the *Calc. phos.*-6x continued.

November 17th.—He felt funny and was drowsy the day after taking the *Tuberculin*. Much better ever since. Much less cough and phlegm. The single dose of *Tuberculin* and the *Calc.-phos.* 6x both repeated.

December 1st.—No particular reaction after the *Tuberculin* this time. Cough very much better. Bowels regular. Appetite good. Some flatulence. Repeat both.

December 15th.—Better in every way. Repeat both.

January 28th.—Remains better. No symptoms, gaining flesh. Repeat *Calc.-phos.* 6x only.

The interest of this case consists in the marked reaction which followed the dose of *Tuberculin* 30 given by the mouth quite comparable to some that have been recorded as produced by material doses given subcutaneously. As usual, the negative was followed by a positive phase with accompanying improvement in the general condition.

Case 4.—I was called to see J. D., a little girl, aged 12, on November 28th, 1910. She was feverish and had a pain over the lower part of the left side of the chest in the line of the axilla

and extending forwards. She gave the history of having been knocked down, and run over by a motor bicycle when returning from school. At the time she did not feel much hurt and was able to walk some distance home, and for the few following days continued to go to school, but the pain came on in the side and hurt her to breathe, and she did not feel well. When her mother took her temperature she found it raised above 100, and therefore put her to bed. When I saw her she complained of pain in the side, and on comparing the two sides it was evident that she moved the left side as little as possible in respiration. There was no cough and no crepitation, dullness or other physical sign except an almost total absence of respiratory sound over the left lower lung. The chest wall was tender to pressure, but not markedly so. There was no sign of fracture of ribs. A diagnosis was made of bruising and compression of the lung without laceration of tissue or fracture of bone. She was given *Arnica* 200, every four hours.

The next day the pain was less, and the following day it was gone, except on making particular turning movements in bed. The temperature was nevertheless higher, and was ascending by steps like a case of enteric fever. Anorexia but no other symptoms. In a few days the pain was entirely gone, the lung expanded freely on respiration, and the patient said she felt well, but the evening temperature was higher than ever, reaching on December 3rd, 104.4°F. This fever continued with apparently nothing to account for it. *Arsenicum*, *Gelsemium* and other remedies had no effect. The temperature chart was suggestive of either enteric fever or tuberculosis, and remembering that I had once aspirated her elder sister for a pleuritic effusion, and that she herself had had other illnesses such as influenza, in which the temperature had run an abnormal course, I thought there might possibly be some latent tubercle, and that at any rate it would do no harm to try the effect of some *Tuberculin*. I accordingly gave her one dose of *Tuberculinum Bovinum* 30, with a dramatic result. The temperature almost at once became normal. The slight rise on the 17th. occurred after the excitement of a children's party.

Case 5.—Mrs. W. had been under the care of Dr. Margaret Tyler for attacks of biliary colic and was by her taken to Mr. Knox Shaw who admitted her into hospital and operated, removing a number of stones from the gall bladder.

Since the operation she has been suffering from attacks of acute pain in the caecal region, associated with nausea and vomiting, and

much tenderness to pressure over the cæcal region. The symptoms were very suggestive of appendicitis, which, however, Mr. Knox Shaw did not think was present. It was for an attack of the kind occurring at Willesden, which was too far off for Dr. Tyler to attend, that I was sent for on June 17th, 1910. The patient had been in bed a couple of days with much severe pain in the cæcal region, and some vomiting of bilious fluid. There had also been several bilious looking stools without any relief to the pain. There was general tenderness over the whole abdomen, but it was especially marked over the right lower quadrant without however any especial or exclusive location to MacBurney's point. There was a sense of resistance and thickening, but no definite tumour. Remembering the affinity of *Iris Tenax* for the cæcal region, as described by Dr. George Wigg, and recorded in Dr. Clarke's Dictionary of *Materia Medica*, I prescribed *Iris Tenax* 6 m.v. every four hours.

June 25th (one week later).—Writes to say "she is very much better and thinks she will get on now."

July 4th.—Came to see me. Looking very well. No more sickness. Pain gone when still, but on walking there is still a dragging pain from the back to the right iliac region, relieved by supporting the right side of the abdomen.

January 30th, 1911.—In answer to an enquiry she writes: "I am glad to say I have not had a return of the sickness and pain of the same kind since your treatment in the summer."—*The Homœopathic World*, April 1, 1911.

Cleanings from Contemporary Literature.

THE IDEAL MEDICAL EDUCATION FOR THE GENERAL PRACTITIONER AND THE SPECIALIST.

BY ALEXANDER DUANE, M.D.,

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One who starts out to propound his conception of an ideal medical education must not be a Don Quixote fighting windmills. He must have the realities in mind and the attainable in sight. Again, while his aspiration for an ideal system necessarily presupposes dissatisfaction with the system that prevails, it should not cause him to lose sight of the splendid advances that such a system represents over the conditions of the past, nor should it arouse any other sentiment than a desire to better what is already good.

In such a spirit, therefore—in a spirit not of destructive but of constructive criticism—let us ask how our present systems of medical education can be improved until they become actually ideal. My own answer to this question, representing an earnest conviction based upon years of thought and observation, may be stated in the following categorical propositions, which, I trust, may not seem too dogmatic.

In offering them I desire to anticipate one objection. I am aware that any such radical changes as are here contemplated cannot be accomplished at once, nor except by slow degrees. All that we can do in effecting any progress of the sort, is to work little by little toward a desired ideal. In order that we may work toward it intelligently and effectively, our ideal should be put before us clearly and in all completeness, though it is not attainable now and though it perhaps never can be absolutely attained.

Furthermore, I realize that a good deal is herein propounded which some of our smaller institutions cannot well accomplish. Yet these smaller institutions are a necessity in a country like ours which combines so many diverse elements and diverse requirements. The output of doctors from a few select institutions with ideal facilities and equipment would never suffice. We must always have the small colleges and they will always hold a considerable place in our educational system. And let me say in passing that many features of the proposed plan can be worked out as satisfactorily by a small institution as by a large one. Nor do I question the willingness of the small institution to make such changes when it can. I do not share in the feeling that the smaller colleges are necessarily inferior to those that are larger and better endowed. I do not believe that the strictures made against them in the report of the Carnegie Foundation are by any means altogether justified and fair. On the contrary, I believe that, apart from some flagrant exceptions, they are doing good work, are progressive, and are turning out men well equipped to practice medicine.

THE MEDICAL COURSE SHOULD HAVE AN AMPLE BASIS OF LIBERAL STUDIES.

By liberal studies, I mean those that are humanistic as distinguished from those that are technical and scientific. The tendency of late years has been to emphasize the value of the latter at the expense of the former. That this tendency is likely to lead to unfortunate results is well illustrated in the case of a sister science, engineering. Quite recently one of the greatest electrical experts in the country—indeed, one of the greatest in the world—addressed an association of college alumni on this point. He traced with great vividness the enormous advances that engineering had made; he showed how step by step technical studies had won their way to the front in our institutions of learning; he pictured how year by year the acquisition of scientific knowledge and drill in precise laboratory methods had pushed mere liberal studies more and more into the background. "And what," said he, "is the result? Engineering is a success, but the engineer is not a success." For, as he pointed out, the engineer, one-sided in training, over-developed in technical ability, under-developed in broad and general culture, had become largely a machine for other men to handle. The initiators and administrators even in engineering enterprises, he said, were the men who, destitute of the technical knowledge of the trained engineer, yet had the breadth of view, the grasp of general principles, the variety of information, and, perhaps, chief of all, the idealism that the latter lacked.

This same expert, speaking to a society of engineers, told his astonished confrères that every engineer ought to know Greek.

Much to the same purpose another engineer and educator deplores the failure of the engineer to take his proper place in civic affairs, and attributes it to a one-sided and too technical education. He adds: "What truly humanistic studies can we rightfully exclude from the list useful as preparation for engineering professional life? Our solicitude need only be exercised to see that sufficient of the mathematical and physical sciences, the historical and economic studies, and the languages make constituent parts of the curriculum, and that the spirit and order in which these are studied are right."

Let us take warning from the experience of the engineers, and see to it that in our desire to produce the technical expert we shall not fail to evolve that still more important product, the all-round physician and man. Let us be heedful lest it be said of our science also that medicine is a success, but the medical man is a failure.

The question of education, indeed, is a good deal like the question of diet. Man needs for his bodily welfare a proper proportion of proteins, carbohydrates, fats and salts. Have any one dietetic element in excess, and the body fares ill.

So, for his mental upbringing, he must have in proper proportion the primary elements of a good education. These, in the inverse order of their importance, are information, mental culture, mental discipline, and the

promotion of high ideals. I have placed information lowest in the scale. Even in a technical school the mere acquisition of information is not the most important part of an education. It must be supplemented and liberally by training in observation, comparison, and deduction, by training in intellectual discrimination, by exercise of the æsthetic faculties, by cultivation of a mental perspective and the sense of proportion, by constant practice in right thinking and in right expression, and by a knowledge of human nature. To a certain limited degree such training can be secured by laboratory exercises and clinical practice, but for their full development it requires an ample infusion of the humanistic studies. To omit these in the preparation of a physician's career, and to ask him to rely for his mental development simply on technical information and practical work, would be a good deal like trying to sustain the body on a diet in which carbohydrates and fats were the staple, and the proteids reduced to a minimum.

There may be those who will admit that this proposition is true for men in other professions but will say that it is not so for the physician. A liberal education, they argue, is all very well and for some it may even be indispensable; but a medical man needs it less in any case, and with so much technical work to master he can ill afford the time for it. To such I would answer that if any man needs a genuine liberal culture nowadays, a physician does. The physician is becoming more and more a man of affairs—one to whom are entrusted large civic enterprises and the settlement of problems involving complex social relations and questions of administration. The public, too, has become critical and inquisitive. It insists on knowing the reasons for things medical, especially in matters involving the public health. The physician must be prepared to meet this spirit of inquiry. He must be ready to explain, to confute, to convince. Not only must he himself know in a scientific way the reasons for what he does, but he must be able to present these reasons in a lucid and convincing manner to the unscientific. Again, the physician must be all things to all men. He must meet the well-born and well-bred on their own plane of enlightenment and culture; and for the ignorant, the prejudiced, the perverse, and even the villainous he must have that large tolerance and that enlightened sympathy which a truly liberal education should beget. A knowledge of human nature and an ability to deal with human problems are not acquired in the laboratory. They are not acquired in the study room, either; but they are more readily learned from Socrates than from Galen, and certainly the study of literature, of the classics, of history, of philosophy, and of economics teach them better than do the study of bacteriology or of anatomy.

Personally, then, I feel sure that in the training of the medical man some things usually thought unnecessary should be included as of major importance. In this I feel that our ultimate aim should be higher than that set for the present in the "Ideal Course" proposed by the Council

of Medical Education of the American Medical Association and still higher than the standard required just now by the Association of American Medical Colleges.

The former, for example, would require eighteen months of actual work in Latin (through Cæsar); the latter would not necessarily require Latin at all except for a knowledge of the grammar. I think that the physician should have had no less than fifty months of actual work in Latin and should have read Cicero, Virgil and Horace. Again, neither the one standard nor the other requires Greek. I believe that every physician should have devoted at least thirty-six months to Greek, and should have read Homer, the dramatists, and Plato in the original. The Greeks were by far the most artistic and the most intellectual people the world has ever seen; their literature represented the highest development of ancient thought; and their language was marvelously delicate and powerful instrument for the expression of that thought. The study of that language and of the literature in the original, bringing us into intimate contact with the Greek mind, fulfills better than anything that has yet been devised the prime objects of education—information, mental culture, mental discipline, and the promotion of high ideals. There is, indeed, no greater training for the mind than is furnished by the study of the Greek language and the translation of Greek originals; and, the Bible and Shakespeare apart, there is no greater storehouse for the mind and no more potent means of mental culture and spiritual uplift than is furnished by Greek literature. The influence of Athens is as vital to-day as it was when Macaulay paid his glowing tribute. No educated man, least of all a medical man, should ever lose personal touch with the classics. To him at least should never be addressed in vain the despairing query of the Oxford examiner: "We dragged whom seven times round the walls of what?"

For my own part I think it of more importance for me as a physician to have read Euripides than to know the technique of the Wassermann reaction. I believe that it is of greater value to me professionally to have studied Greek than to know German. This opinion, old-fashioned and indeed, obsolete as it may seem, is based on a somewhat extended observation of different educational systems for a good many years, during which I have seen the rise and fall of several fads and have acquired a realizing sense of what one most practical man meant when he said: "Prove [test] all things; hold fast to that which is good." I hold fast to Greek.

History, ancient and modern, is an indispensable element of a physician's education; and so far from making nine months' study the minimum requirement as in the "Ideal Standard" of the American Medical Association, I should demand at least thirty months in this branch.

In English, also, including rhetoric and composition, I would require more than the minimum of eighteen months' work set forth in the standard mentioned. Considering the paramount importance of this study

to any man and the painful evidence of its neglect that we daily encounter, I am sure that not less than fifty months of actual work are necessary. Such work would include, of necessity, a thorough knowledge and critical study of the Bible, considered as a masterpiece of literature, to be ignorant of which is a mark of an insufficient and illiberal education.

Knowledge of the modern languages is important—I will not say essential. Yet an education to be ideal will comprise at least a reading acquaintance with French and German.

Economics, sociology, philosophy, psychology, and logic certainly should not be neglected in any scheme of education designated as liberal.

Mathematics is an important element in liberal training. The amount at present required seems ample—perhaps, indeed, more than enough.

Finally, an extremely valuable aid to the medical student is a knowledge of drawing; and instruction in this art—particularly in drawing from nature—should be a regular part of the curriculum. Training, as it does, hand and eye, and drilling the student in observation, drawing should be taught seriously and thoroughly.

2. MEDICAL AND LIBERAL STUDIES SHOULD BE CO-ORDINATE.

In the present arrangement the medical student passes abruptly from his non-technical to his technical studies, dropping the former absolutely as soon as the latter are taken up. This should not be. His education from beginning to end is an organic whole, the different portions of which should fit into and reinforce each other. For as long as possible in the course liberal and medical studies should be co-ordinate, not consecutive; and not only should they be co-ordinate, but should be pursued with equal interest and energy. As expressing my views I cannot do better than quote again from Professor Jackson's address: "Some more effective correlation of the liberal and professional curricula . . . should be devised than can be obtained by putting them end to end. A butt joint does not appeal to an engineer as a desirable arrangement for use where a well-knit and smooth splice is needed." And again: "The study of historical and economic subjects is of an importance in the engineering curriculum that rivals the study of science subjects; and, in order that the relations of engineering science and political economy may be understood and appreciated by the students, the study of such subjects may preferably be carried on side by side. . . . A span of horses makes a more effective team for co-operative work than a tandem pair, though it may not be so showy." True of engineering, which deals with inanimate things, how much more is this true of medicine, which deals with man, and in which, therefore, the combination of the humanistic and the technical sides of education should be just so much the more close.

Such a correlation of technical and liberal studies, if properly carried out, would make the student realize that his humanistic training is an integral and essential part in the preparation for his life work. He

would take his humanistic studies seriously and would devote to them time and attention now wasted. We should not then have to complain that desultory habits and slipshod methods acquired in college life had unfitted the college graduate for the hard grind of the medical school.

A correlation of this sort is naturally best effected in a university amply equipped with instruments and laboratories. In such an institution the medical student would enter the college of liberal arts and early in this course—in his second year, even—would begin his preparatory medical studies (biology, chemistry, bacteriology, physiology). As he progresses, these would occupy more and more of his time, but they would not even late in his course entirely supplant the humanistic studies; and at all times the latter would be treated as having a significance equal to that of his technical work and would have an equal weight in examinations.

Such a combined course would pretty certainly take sixty months of actual work, spread over six years or seven according to the length of the study terms. It would necessarily involve the conferring of two degrees—of A.B. some time during the course and of M.D. at the end of it.

3. UNNECESSARY TECHNICAL WORK TO BE ELIMINATED.

Our present system lays rather too much stress and spends too much time on narrowly technical details. By the elimination of these not a little time could be saved.

Personally, I would cut out much of the laboratory work. The student should have enough experience in this to learn the principles of chemical analysis and bacteriological study; but practice in the elaborate technique of such work can well be left to the expert. The like may be said of subjects like *materia medica*, toxicology, major surgery, and most of the specialties.

I do not mean that these subjects should not be taught. On the contrary, they should be taught in all their ramifications. The medical school, indeed, should aim to teach everything in medicine. But it should not try to teach everything to every man. The broad fundamentals of laboratory work with just sufficient practice to drive these fundamentals home; the broad fundamentals of medicine and surgery with abundant clinical practice; and the broad fundamentals of each of the specialties combined with sufficient illustrative clinical experience are all that we can reasonably require of the average graduate. He should not be required to learn or practice the more elaborate tests and finer minutiae of special work, which he will have no occasion to use in his ordinary practice after leaving college, and which, anyhow, will very likely be superseded in a year or two by other tests and other minutiae more precise or more correct.

To those who wish such special instruction it should be given and in all abundance by means of electives. To this point we shall come back later.

4. THE MEDICAL COURSE SHOULD BEGIN AND END EARLIER.

The old medical course with all its failings had this merit that it started a man in his life work before he had had time to lose his initiative and his enthusiasm. Now the student, especially if he takes a hospital course, frequently does not begin practice until he is twenty-eight. Many cannot afford to wait so long before beginning to earn a livelihood. Even if they can, they have by this time lost some of the flexibility of mind, the fervor, and the originality that distinguish the younger man. It would undoubtedly be better if the physician started fully equipped for practice at twenty-five or earlier.

How to effect this is a serious problem. We are demanding all the time more and more knowledge from the medical student and it is even proposed to lengthen the medical course to five years. As already stated some of the work we exact can doubtless be eliminated; but even allowing for this deduction, the amount of actual technical work required could not be accomplished in less than four years of eight months' session each.

One obvious way of meeting the difficulty is to lengthen the sessions. There seems no good reason why the medical student should work but eight months in the year. Such a long break as four months in any course of studies is apt to be damaging. It is not demanded by any hygienic considerations. A vacation of two months or, indeed, of six weeks is ample. If the sessions were each ten months instead of eight the work could be better distributed, less being crowded into each day, and the four years' course could still be reduced to three and a half. If the same principle were applied to the combined course here advocated, the latter could readily be accomplished in six years. In this six-years course the clinical and laboratory work could largely be relegated to the summer months.

But, after all, the remedy for the present condition of things lies not with the medical college nor with the university but with the preparatory schools. The latter by their over-crowded, ill-arranged courses, their over-long vacations, and their too desultory methods of teaching, prolong unduly the period of preliminary training. The result is that our high school students are two years behind Europe in actual attainment and much further behind them in concentration and ability for study. Ultimately a reform must take place. The inordinate vacations will be cut down, some unnecessary and merely ornamental studies will be eliminated, and the work that is required will be done with absolute thoroughness. Then our preparatory schools, instead of turning out pupils imperfectly prepared for college at eighteen will turn them out well prepared at sixteen. Such a student taking up the combined liberal arts and medical course at sixteen will graduate in medicine at twenty-three, possibly at twenty-two.

5. NECESSITY OF INDIVIDUAL TEACHING.

To secure the best results, the ideal medical course should seek to retain and to emphasize that most valuable feature in any system of

training, viz., individual teaching—the man-to-man contact of instructor and pupil. In the old days this was obtained by the preceptorial system. Each student was supposed to study medicine for three years under a preceptor who was selected by the student himself and might or might not be connected with the faculty of the medical school. In my day the connection between student and preceptor had become largely nominal, but before that, it was often a real one and of great importance to the student. The preceptor being often a man of brilliancy and force, and his relations with his students being intimate and informal, the instruction, no matter how haphazard, sank in deep, and carried with it a personal impress, which in the case of a master-mind was worth far more than the knowledge itself.

It would probably be impracticable to revive this system now, nor would it be quite desirable, since, to accomplish the best results, the preceptors should be under the control of the medical school, so that the teaching of the two can be properly co-ordinated. The desired object might be secured by the adoption of some such preceptorial system as obtains at Princeton. This would mean a considerable enlargement of the present teaching force. Out of this a number of men would be appointed preceptors, and to each of these four or five students would be assigned. As in the case of the old preceptors, the relations between instructor and student would be intimate and informal; the instruction would be individual. The preceptor meeting the students assigned to him twice a week or oftener, would straighten out their difficulties, find out their weak points, stimulate them to enthusiasm, and confirm them in their knowledge.

This preceptorial system would be still more useful to the student when he took up clinical work, for in this, more than in anything else, individual teaching is required. To this point we shall recur presently.

6. CLINICAL INSTRUCTION SHOULD BEGIN EARLY.

The medical student, disheartened by the apparently endless grind of theoretical studies and laboratory practice, is usually mightily stimulated and encouraged by his first contact with practical medical work. It is important that such contact should come early in his course, because it not only relieves the monotony of his theoretical studies, but also because it shows the real relation of the latter to his professional work. I believe, in fact, that a student should begin to observe patients before he has begun to study the theory of medicine and surgery. A person who does not yet know the pathology or symptomatology of typhoid fever, nevertheless by observing a case of this disease can learn a vast deal about practical medicine. Under the tuition of his preceptor the student can learn how to observe symptoms, how to take histories, how to write a prescription, how to administer medicine, how to give a hypodermic or a cold bath, and how to nurse a fever patient. Such practical information will be of great help to him later, when he is trying

to master the more specific theoretical information given by his text-books and teachers.

This sort and amount of practical work I should introduce in the fourth year of the combined course (corresponding to the second year of the present medical curriculum).

7. CLINICAL WORK TO BE GRADED AND RESPONSIBILITY GRADUALLY INCREASED.

In the last two years of the medical course more and more stress will naturally be laid upon clinical work. But this should not mean simply that the student sees more and more cases. On the contrary, it means that he gets more and more practice in handling cases himself. In no other way can he really learn his art. Such practice would necessarily be graded just as it is in the case of a hospital interne. In other words, the student under the guidance of his clinical preceptor would examine and as his experience increased would treat patients specifically assigned to him for observation. He would follow the course of the cases from day to day, noting the symptoms and presenting written reports to his preceptor. Little by little he would be allowed a freer hand and be given more responsibility until at the end of his final year he would be able to diagnose and treat conditions of ordinary disease and injury, such as he will be likely to meet in practice.

This would mean more time spent by the student in clinical work and would involve cutting out some of the theoretical teaching and particularly some of the laboratory work. The exchange would be well worth while.

If this plan of individual work under the guidance of clinical preceptors but with increasing responsibility on the part of the student should be carried out, the graduate from the medical school would not have to supplement his college course by a postgraduate term in a hospital. It would be desirable, indeed, that he should do so, but it would not be necessary. And this is as it should be, for the conferring of the degree of M.D. should mean that the possessor of the degree is *ipso facto* not only entitled but also qualified to practice.

8. NECESSITY FOR A UNIVERSITY HOSPITAL.

If the student is thus to have early, abundant and graded clinical instruction under the individual guidance of his preceptor, the medical school must of necessity have its own hospital in which such a preceptor is *ex-officio* an attendant. For other reasons, too, such an adjunct is an essential in the ideal organization of a medical school. The latter would not then have to depend on any outside hospital to supply it with clinical material and clinical teachers. It would thus be unrestricted in the choice of its teaching force, and would have complete control of all the cases and the pathological material that could be utilized for instruction or for research.

9. MULTIPLICATION OF ELECTIVE STUDIES.

According to the plan already proposed all that we should require

of the average medical student for graduation would be the broad fundamentals of theory and a laboratory practice supplemented by a generous amount of graded practical work in clinical medicine and surgery. For the man who seeks special honours, for the man who aims later to specialize in laboratory work, in pathology, in the refinements of physical diagnosis, in surgery, in ophthalmology, or in any other branch, electives should be offered. These as a rule would not be taken up until the last year and would then replace a certain amount of the clinical work required of the ordinary student. For example: In ophthalmology every student (preferably in the year before the last) would be made to observe and learn the distinguishing marks of conjunctivitis, iritis, glaucoma, and corneal ulceration, and would master the principles of treatment of each. He would get such a practical acquaintance with the ophthalmoscope as would enable him to make out the gross lesions—cataract, vitreous opacities, optic neuritis, optic-nerve atrophy, large retinal exudates and hemorrhages—and such acquaintance with the visual tests as would enable him to determine without any special instruments the vision, field, presence of a scotoma and presence of color blindness (the last with particular reference to the diagnosis of toxic amblyopia). As to refraction he could know what hyperopia, myopia, astigmatism and presbyopia are, and would get a general idea of how they are corrected, but would not be required to learn the technique of refraction-testing. On the other hand, those who elected ophthalmology would in their final year have more precise instruction in this branch with additional clinical work, and would be taught how to determine the refraction accurately by the objective tests and the trial case. It would be understood that such an elective course would not qualify a man to practice ophthalmology. It would simply pave the way for him to do so later if he wished, and furthermore would enable a man who intended taking up practice in a place remote from specialists to do more justice to his patients in this important branch.

The choice of electives would naturally be subject to careful regulation. They should not displace too much clinical work, and anyone wishing to take many electives should put off some of them to the postgraduate year.

10. ENCOURAGEMENT OF ORIGINAL WORK.

It is the reproach of our universities in general and of our medical schools in particular that they do far too little research work. For research, indeed, the student tied to a Procrustean routine has at present neither leisure nor inclination. Yet it is important that he should devote some time to it. Original work, even if it leads to no great results, is a mental stimulus of considerable value to the one who undertakes it, and, more than anything else, it leads him to esteem and correctly to appraise original work in others. Moreover, some at least of those who do original work in their undergraduate days will receive the impetus to do effective research in after life.

Some provisions of the educational plan here advocated will make it easier for the student to develop along individual lines and do original work. The widespread application of individual teaching, the introduction of clinical study early in the course, with graded clinical work later on, the opportunities offered by the university hospital, and a wisely limited use of electives will all tend to this end. So too will two features not yet touched on, viz., the requirement of a thesis for graduation and the wide range of subjects offered in the postgraduate year.

• 11. REQUIREMENT OF A THESIS.

It seems a pity that the good old custom of requiring a thesis for graduation was ever dropped. After a long period of prescribed study and of routine work mapped out for him by his instructors, the student, called upon to prepare a thesis, suddenly finds himself compelled to do some searching of a literature outside of his text-books. In doing this he is learning the sources for himself and no longer leaning on authority, he learns to compare and weigh evidence for himself, his intellectual faculties are exercised, his interest stimulated, and his mental horizon enlarged.

If the student is taking the combined course, I believe that at the time he comes up for his A.B. degree (at the end of third or fourth year), he should present a thesis on some non-technical topic; and as a preliminary to his graduation in medicine at the end of his final year he should present a thesis on some medical subject. In either case, as of old, the thesis should be counted as the equivalent of an examination, and failure in it would count as a failure in a major subject.

12. THE POSTGRADUATE YEAR.

In order to fulfill its entire function as a training school in medicine, the university should have a postgraduate year devoted to all kinds of electives and special studies.

This would subserve several purposes.

First, it would help the man who, not caring to become a specialist, yet wishes to obtain a pretty intimate knowledge of three or four specialties at once—a thing he could not well do during all the other work of his undergraduate course. Such would be the man who intends to engage in country practice, where he would have to be more or less adept in all branches. For such a man the postgraduate year might well take the place of a year or two in the hospital, and for his purposes it might be even more advantageous.

Again, such a postgraduate year would be useful to any graduate who wishes to study the latest developments in any particular line—in laboratory technique, for example, or in major surgery. In particular, it might aid the practitioner by giving him under proper regulations opportunity to practice operations on the cadaver, or guide the practitioner who wishes to do special research work.

Lastly it would serve to educate the specialist.

13. EDUCATION OF THE SPECIALIST.

One of the most important functions of the university would be to educate the specialist. At present the training of the latter is accomplished in the most haphazard and often unsatisfactory manner. Nor have our postgraduate schools adequately solved the problem.

My conception of the requirements for the education of a specialist are these:

1. Either in his undergraduate course or in the postgraduate year he must have taken an elective in his chosen specialty, and an elective in any closely affiliated branch (e.g. in neurology if he is studying ophthalmology).

2. He must have had at least two years of postgraduate clinical work in general medicine and surgery—preferably in a general hospital.

3. After this—not before—he must take a year's work (ten months) in the postgraduate course of the university in his specialty. This would comprise theoretical technical work, lectures, recitations, and continuous practical work as an assistant in the college dispensary.

4. He must present a satisfactory thesis on some subject connected with his specialty.

5. He must pass a satisfactory examination in the theory and practice of his specialty. This would include an examination in the diagnosis of cases taken from the college dispensary.

14. THE DEGREE OF PH.D. FOR THE SPECIALIST.

It is only fair that one who has spent so much time to fit himself and has proved his fitness by examination should receive a special degree. A diploma or certificate is hardly an adequate equivalent for the time and labor expended.

The proposition made by a distinguished colleague in Chicago to give the degree of Master of Medicine seems unwise, because in the first place to crown the degree of doctor by that of master is an anti-climax, and in the second place any new degree such as M.M. is likely to be confounded by the public with the various non-medical titles given by the "colleges" of optometry, neurology, etc. Much better is the proposition to give the degree of Ph.D. (to which, if thought necessary, may be added in parenthesis "in medical science"). This degree is known the world over as an honorable distinction conferred for postgraduate scientific work. There is no reason why it should not be given for postgraduate scientific work in medicine.

RESUME.

The propositions I have made may be summarized in the following ideal sketch of what I should hope to see obtaining in the future.

1. The ideal medical course will be based on or rather will contain a large number of humanistic studies, comprising prominently Greek, Latin, English, history, economics, psychology and drawing.

2. These humanistic studies will be pursued side by side with the technical work and will be treated as of equal importance. This co-

ordination of the two will be best effected by a combined liberal arts and technical course leading to the degrees of A.B. and M.D. This course will comprise sixty months of actual work which can well be compressed into six years.

3. For the ordinary medical student intending to become a general practitioner, some of the technical work now required (especially in the laboratory) will be eliminated—its place being taken by clinical work or by humanistic studies.

4. The medical course will begin and end earlier. This can be effected by making the work in the preparatory schools less diffuse and more thorough and by lengthening the terms both in the schools and in the university from eight months, to ten. In that case the student will begin his combined course at sixteen, get his A.B. at or about twenty, and his M.D. at twenty-two.

5. Teaching will, as far as possible, be made individual. This will probably be best attained by the appointment of numerous preceptors. Each preceptor will have charge of four or five students, and it will be his business to see that they understand their work and that they do it properly. His relations with them will be intimate and informal.

6. The student will enter upon elementary clinical work early in his course and even before he receives any didactic instruction on the theory and treatment of disease.

7. Clinical work will be graded. Step by step the student will learn to handle cases for himself. Under the guidance of his clinical preceptor cases will be put under his care, whose course he will follow day by day. As his experience increases he will be accorded more responsibility and a free hand, until at the end of his course he will be competent to diagnose and treat any ordinary cases of disease. When he receives his degree he will not need a supplementary hospital course in order to qualify himself for practice.

8. The university will have its own hospital which shall be completely under its control and which shall be officered by its own preceptors.

9. The university will provide all sorts of elective courses in all branches for undergraduate and postgraduate work. The selection of these by students will be strictly regulated, and only a very limited number can be taken by any one man before graduation. After graduation it will be possible for the student to get at his university the most detailed instruction and the fullest practical work in any medical subject.

10. The student will be systematically encouraged to do original work. Efficient aids to this end will be the plan of individual teaching and of individual clinical work here advocated, together with a wise application of the elective system.

11. The thesis will be restored as a requirement for graduation. In the combined course the student will present two theses—one on a non-technical subject for the degree of A.B., the other on a medical topic.

for the degree of M.D. In either case the thesis will count as the equivalent of an examination in a major subject.

12. The university will give ample postgraduate instruction in all departments of medicine :

(a) For the benefit of graduates, especially those aiming to be country practitioners, who without desiring to be specialists, yet wish to be more or less conversant with several specialties ;

(b) For graduates who wish to pursue some special line of research or get special information in any field ;

(c) For those wishing to become specialists.

13. To the specialist the university will give an adequate, systematic and thorough training. It will require of him :

(a) That he take certain specified electives either in the undergraduate course or in the postgraduate year ;

(b) That he spend at least two years after graduation in general medical and surgical work (preferably in a hospital) ;

(c) That he afterward spend a full year in postgraduate work at the university in the theory and practice of his specialty ;

(d) That he present a thesis on some subject connected with his specialty ;

(e) That he pass a satisfactory examination in the theory and practice of his specialty.

14. On his fulfilling these requirements the university will confer on him the degree of Ph.D.—*The New York State Journal of Medicine*, March, 1911.

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[No. 6.

GERMS—THE CAUSE OF DISEASE—

By A. Pulford, M. D.

It seems to me, that to any intelligent mind "the germ is the cause of disease" is a very fallacious statement. To be an acceptable fact, the cause of disease should be the rule and not the exception. In other words, should diphtheria develop in a family, not only every member of that family, but the physician, the nurse and every one who came in contact with the patient should develop the disease, if it be true that the germ is the cause. But do they? Be honest now. Is it not a fact that the ones who take the disease are the exception and not the rule? If it is the exception, who takes it then? Does this not prove the rule that the germ *does not* cause the disease?

That people develop disease after visiting others suffering from a similar disease is merely coincidental, and as these cases are so few compared with the great majority who do not get it, it again proves they are the exception and not the rule. Again, as to the so-called "period of incubation." Nature has a *fixed* time for the period of incubation of *all* germ life. Then why is this discrepancy in the period of incubation of measles (10 to 14 days), of scarlet fever (1 to 6 days or longer), of chicken pox (4 to 12 days), etc., etc., etc.? There can be but one explanation of this discrepancy of time in the "period of incubation," and that is: "Purely a matter of coincidence."

In other words, the outward manifestation of the internal state has not always made itself manifest on the one hand, or been noted on the other, with equal promptitude, yet in each case internal manifestation has gone on just the same, while you have only reckoned from the time of so-called "exposure." If this is not a fact, what other reason can any one give for Nature having a fixed period of incubation for all other germs, and a hap-hazard one for the germs of disease?

If germs are the cause of disease, rather than the result, why should not the letter that was said to be the cause of measles in the German Royal family have caused this disease in those who handled, instead of singling out a pair of isolated beings? Was not this rather a coincidence, rather than a positive cause? Can any one prove beyond question of doubt that these two cases were not developing this condition at the time they received and kissed the "fated" letter? Our very currency settles the question ("Are Germs the Cause of Disease?") negatively, beyond all questions of dispute. Just think of the millions who handled this filthy, germ-laden paper, year in and year out. On this filthy paper currency are germs enough to lay the entire population of the earth on its back and cause it to become a writhing seething mass of disease. Is this not so? But, does it?

'Again, if the germ was the cause, and not a dependent, germ life would develop on barren soil, but does it? That germs do not develop disease, but rather are the result of disease, is shown by the fact that diphtheria, small pox, chicken pox, measles, scarlet fever, etc., have developed in isolated cases, in isolated places, where neither exposure nor other known cause existed, outside the condition of the child itself. I have myself attended several such cases.

On the other hand, I feel confident that all diseases originate in but one way, its source depending on the individual condition of the patient and that is by a chill, however slight or severe. This chill, killing off the corpuscles as it does, disorganizes the blood, the debris results in fermentation, the resultant decay

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furnishing the leaven for the soil for the vitalizing of the germ, whether the said germ happened to be within or come from without; while on the other hand the germ prepares nothing, neither can it per se develop itself, or cause or create anything. Healthy soil is barren soil; if this is not so, why do you put rotten manure or fertilizer on your garden to make it more fertile? It is this same fertility in the body, produced by the fermentation that causes the disease and thereby develops the germ. If these were not so, then every healthy body coming in contact with the germ of any given disease would be bound to come down with these conditions produced in inverse ratio, to prove that the germ caused the disease, and no being could escape. But, is this so? It is not. This proves then that when a germ falls on barren soil it is inert, produces nothing, and therefore causes nothing, as the majority of cases coming in contact with these germs go to prove. To my mind, the greatest proofs that germs are not the cause of disease are as follow: Their inability to develop on barren soil; the discrepancy in the time of the "period of incubation;" that the cases resulting from direct infection are the exception and not the rule, as only large numbers are reported in epidemics, said epidemics depending on atmospherical influence on the body, and not the germs. If your health is such that you can withstand the atmospherical shock, you will escape disease, germ or no germ.

The worm theory, the louse theory and the germ theory have everything in common barring the size of the animal, and when indicated *Cina* 30x, *Lyc.* 30x, and *Lac can.* 30x will lend their benign influence to render the respective soils sterile to the respective animals, and Messrs. Worm, Louse and Germ will make a gum-shoe departure, thus showing that they are dependent on the state of the body instead of the state of the body being dependent on them or their influence. If this is not so, why do worms, lice and germs disappear after the exhibition of the 30th. potency, which has no germicidal power?—The *Homoeopathic Recorder*, April 15, 1911.

THE MISUSE OF FOOD, THE PRINCIPAL FACTOR IN THE CAUSATION OF DISEASE.

BY ELMER LEE, A.M., M.D., NEW YORK.

Late Chairman, Physiology and Dietetics, American
Medical Association.

The science of living begins at the mouth. As a man eats and digests his food so he is. Owing to errors in human feeding, disease is latent in every man and at all times. The few that do not abuse health have the rewards which follow upon it. Scarcely anyone escapes sickness and pain. Life is maimed and but half what it might be on account of sickness and premature death. Sound health means living by knowledge and not by chance.

Grains of the cereals are only good, but the cooks spoil most of them before they reach the human palate. Conventional cooking is far from blameless in the causation of disease. Artificial appetite and gluttony please for the moment, to be followed later by compound interest in pain and bodily distress. The mouth is the open door to health and strength, likewise, to self-injury and early destruction.

True hunger is the gauge that tells how much to eat. Taste recognizes what is good and directs how long food is to stay in the mouth to be acted upon by saliva, while the sense of smell is always on guard to aid taste in selecting the wholesome and to reject the harmful substances offered as food. With hunger, taste, smell, all acting in harmony, the stomach is safe.

Wrong habits early acquired often abuse the hospitality of the stomach. The first warnings of injury, done to the gentle, patient stomach, are mild, followed later by absolute protest against further abuse; finally, after much warning, many protests and great injury, disease is established. Then come suffering, disability and sorrow. But, fortunately, it is never too late to mend.

Digestion is properly performed by the stomach and its juices, only in those instances in which the foods are correctly selected and aided by gentle cooking. Owing to the artifices of modern

cooking, the sense of taste is confused, the smell is bewildered and appetite is uncertain or exaggerated. Such delicate sense tools need careful and trained handling lest their edges be dulled. If these human instruments of precision are to last and be useful till age is ripe, beware of abuses and rough usages.

Foods are forced into the gullet and stomach too rapidly. Coffee and other drinks distend the stomach. Too much haste is the rule. Too much is eaten is the common practice of young and old. The stomach is loaded too quickly and with too much. Eagerness to eat much and too often, and a desire for an overgenerous variety, swamp the digestion.

Eating and drinking for health and strength are two of the finest arts in the life of the human being. But neither eating nor drinking can safely be left to human instinct or customs. These are processes so delicate and subtle, and far reaching in their consequences, that it is not safe to trust to the instinct alone, unguided by intelligent forethought and experience.

Social custom has made modern dining a prolonged misdeed against the stomach. Dining for sociability would not excite protest, were it practiced with a due regard for the higher uses of food as a means of satisfying natural hunger. By virtue of the fullness of vitality, it is common to fall into the habit of table wrongs, and, apparently, be well.

In reality, so delicate are the organs of digestion, that even slight errors of the diet may bring on disease and fatality. If the mouth were taught to reject what is unfavorable in the digestion of food, and if food was in the proper proportions and quality, no one could know by any unpleasant sensation of the existence of a stomach. In health there is no consciousness of internal organs or processes.

It is so ordained that man may live to an age of sixty or seventy years, but to suffer half his life from disease is not satisfactory living. A life under right habits of living is worthy of every man's best efforts. Living according to the intent of nature should carry human age above one hundred years, and

the last years ought to be the pleasantest. Honor and respect is due the old, especially if that old age is the reward for prudence and righteous living.

A man frequently wants to die after he finds that his powers are failing and his nerve lost. Loss of vitality and shattered nerves are usually ascribed to over-work and over-worry, but a truer explanation is indigestion. Over-work of the stomach and foods that are not wholesome, constitute the first weak link in the chain of health. Such food material as is not in a state of adaptation for easy solution when it reaches the stomach may, and usually does, lay the beginning for consumption, cancer, tumors, abscess, rheumatism, neuralgia, neuritis, paresis, ~~paralysis~~, Bright's disease, apoplexy and nervousness.

Every care is to be taken to preserve a sound stomach, and this is most successfully accomplished by paying great attention to food while it is yet under the control of the hands, the senses, and judgment. The importance of thoughtfulness in food selection is a matter that can not be overstated. It assures certainty of digestion, and saves the stomach, from fag and disease. A sound stomach is the surest means of avoiding sickness in other parts of the human body.

If the stomach is over-served with heavy, fatty food, and, especially, if such food has not been partly digested by correct cooking and ripening and softening, some part of the contents pass into the system in a state of incomplete digestion. Dyspepsia and indigestion are widespread, and by reason of such defects at the very source of strength, the body is weakened and accumulates sediment faster than the system can remove it.

A single mistake is but a trifling incident in the whole life of the body, but many such happenings, day after day, build surely for sickness, suffering and premature death. Let any one take note of the passing hence of friends and acquaintances, and who is there that can truly feel safe?

Health and safety depend on right habits guided by knowledge and not by a belief. Physical human requirements are not to be neglected under the supposition that some power, outside

the body, will save man in the face of his repeated mistakes. By taking heed and supplying the needs of human life as we know it, it is reasonable and right to expect immunity from suffering and disease.

The disease called Grippe or Influenza, for example, originates in consequence of some defect of the stomach. It is impossible to acquire foul blood and consequent bodily disorders where right feeding is the daily rule. Such diseases are not to be treated at the point where they first show themselves. The affection in the nose and throat in such cases are convenient spots selected by the disordered system to give a warning of the revolt going on within the body.

The disease is always inside the organism before it appears upon some part situated nearer the surface. Mucus or yellow pus from the throat, nose or lungs is the *effete* product from a diseased blood. The system is trying to remove the waste by forcing it to the point of least resistance, such as the nose or throat that it may be thrown off.

A scientific treatment of disease begins by kindly prohibiting the entrance into the stomach of all objectionable food substances, till such time as the blood can free itself from the waste with which it is surcharged. It may take the blood in a few days, even a few weeks or months, to so renovate itself as to make it safe to again return to the usual table-food.

The scientific physician of experience will observe patiently and confidently the patient's need for nutrition, as unmistakably shown by weakness and loss of weight. It is good treatment to offer what is delicate, light food to a sick person. Nothing is ever lost by encouraging the return of real hunger, and everything is gained for the good of the patient.

Let not your fear of complications, or your theories of fasting, or waste of patient's strength, cause any neglect of the foregoing rules in the scientific treatment of the unfortunate sick. The hunger signal will appear in due time, but if it should not come, it shows that the case is hopelessly fatal, in such cases it would be wholly useless to force food.

The alimentary canal is the root of life. The weight of the body depends upon the amount of food that it can prepare and absorb, while strength and bodily comfort, depend upon so much as is perfectly converted and assimilated. Perfect digestion depends upon health of the vital organs, and in turn perfect health of the vital organs depends upon a perfect digestion.

It is seen by this interdependence between vital parts and digestion, that continuous health depends upon an "even balance of forces acting in harmony. If the food is proper and digestion perfect, nature has a fair chance to show itself in the beauty of health.

Mental and physical wrecks and human beings with added sorrows, are directly traceable to mistakes which start at the mouth. It seems strange that man's food, his best ally, can at the same time be his greatest danger. Food may be good and wholesome, but it is not to be admitted into the stomach till it has been inspected and passed, as safe, suitable and bland. It is a common mistake to think strength possible upon scanty food, on the contrary physical endurance is a matter of perfect digestion and full eating.

Temptations of the table and sideboard appear hard to resist, habit is strong and holds on with a tight grip. Children are misfed as a rule from the beginning, thus creating a bad tendency before the infant leaves the nurse. As a growing child, the dangerous habit of gorging candy and stimulating food if unchecked, child sickness and disease are thus produced, and in no other way, save in rare cases.

Children have many narrow escapes from death, but reserve vitality carries some of them to mature years, even though affected with disorders and disease all along the way. In spite of daily and oft repeated errors, children manage to live and grow, but many are stunted and deformed by the time the growth is finished. False table-habits begun in the early years of life are next to impossible to correct.

The list of favorable edibles is extensive, the better articles are in the following enumeration. The quality and service of any

food material rests largely upon the mode of preparation, and use at table. The best foods may be spoiled in the kitchen. The cooking of foods for table use is a calling that is second to none, a worthy, high, noble profession or work.

TABLE OF FOOD ARTICLES.

Tomato, celery, radish, beet, turnip, carrot, cabbage, asparagus, squash, potato, onion, spinach, kale, lettuce, cucumber, romaine, endive, oysterplant, kohlrabi, celery knob, rhubarb, and some others.

Apple, peach, plum, pear, orange, lemon, grapefruit, banana, pineapple, raisin, apricot, berry, cherry, grape, cranberry, fig, date, prune.

Bean, pea, rice, wheat, oat, rye, barley, corn, hominy, macaroni, honey, sugar, salt, pepper.

Peanut, pecan, walnut, hickorynut, almond, filbert, brazilnut, chestnut, pinenut.

Oysters, fish, poultry, meat, eggs, milk, cream, butter, cheese, game, are unfavorable human foods; if used at all, it should be in emergencies, or sparingly.—The *Medical Times*, April, 1911.

A STUDY OF NATRUM MURIATICUM.

By T. G. STONHAM M.D. Lond., M.R.C.S. Eng.

BEFORE dealing with the subject of my paper, I wish to thank the members of the Liverpool Branch of the British Homœopathic Society for the honour they have bestowed on me by asking me to read a paper to them this evening. The number of evenings at the disposal of the Society in a Session is limited, and when I see before me so many who have already by their past contributions proved what interesting and instructive papers they can produce, I am the more sensible of their generosity in giving up one of their evenings to a stranger who, I fear, will be but a poor substitute for one of their own number.

I was given to understand that the Liverpool Branch of our Society desired me to read a paper on some *Materia Medica*.

subject. Now unless I am prepared to introduce some entirely new drug or some new provings of an old one, it is not possible for me to present to you anything of much originality. I have no new drug or new provings to bring forward and so must content myself with choosing an old and well-known one, viz., natrum muriaticum, and incorporating in my study of it my own personal experiences with it, trusting that the subject itself may be of sufficient interest to such keen students of the *Materia Medica* as you are, to cause you to overlook and excuse the imperfect manner in which I am able to treat it.

Natrum muriaticum, or common salt, is more widely distributed in Nature than any other substance, except water. It is present in all the tissues and fluids of the human body, and is the most important of the chemical substances found in the blood plasma, in which it is present in the proportion of about 0.7 per cent. From its simple constitution, and from the fact that the body cells readily take up sodium chloride, whereas they do not so readily take up other salts, the phosphates, sulphates, carbonates, &c., salt is the great regulator of osmotic tension in the organism, and performs by this means one of its chief functions, viz., keeping the blood serum at a uniform specific gravity. The whole quantity of salt in the human body is approximately 11 oz.; and if more than sufficient to counter-balance the daily waste is introduced into the system, it is at once excreted by the kidneys. The constituent elements of the blood plasma have a great stability and are found in an almost constant quantity, so that if salt is taken in excess it is not allowed to accumulate in the blood serum but must be at once drained off by the kidneys, or if their salt excreting function is impaired it is deposited in the tissues. The average daily consumption of salt is put by Widal at a little over $\frac{1}{2}$ oz. It was thought at one time that salt increased the proportion of hydrochloric acid in the gastric juice, but this has been shown by Dr. Reichmann to be an error; nevertheless, if the body is starved of its due amount of salt, the hydrochloric acid percentage will be reduced. [1] Voit says that "Culinary salt is a powerful

stimulant of tissue metamorphosis; it increases by means of its physical properties, the capillary circulation of fluids in the organism; it increases the oxidation of albumin, and through this the quantity of urea excreted. Culinary salt is a true diuretic. In order to excrete the salt from the body, water is required; this water always passes through the kidneys, and, if the supply of water from without is limited, is abstracted from the tissues." Voit's statement that salt increases the excretion of urea is confirmed by [2] Dr. Bischoff's experiment; he found that a dog taking daily 1 lb. of beef without salt excreted 22.5 grm. of urea, while with the addition of salt to the drink he excreted 28.34 grm., showing an increase of 5.84 grm. of urea, daily. As this increase of tissue metabolism is produced by salt we are not surprised to learn that it acts as a stimulant to motor activity. Like all excitations this stimulation hastens on fatigue and necessitates a compensating rest. This exaltation of energy is accompanied by a feeling of well-being such as is constantly associated with stimulants which exalt the capacity for work and provoke an illusion of increased power. It will be readily understood, therefore, how easily a habit of excessive salt-taking is formed and how difficult it may be to break it off. It is astonishing how many people indulge in excessive salt-eating; in fact, nearly everyone takes a great deal more than is necessary to supply the needs of the system. Two grammes daily are all that is required and anything beyond this is luxury. As 2 grm. are about the amount normally present in our food, the practice of taking salt on the plate to add to it is superfluous. There is much less sodium chloride in vegetable than in animal food and, for this reason herbivorous animals are much more greedy for salt than the carnivora, which appear to care little for it. It is probably for this reason that in religious rites we find that when animals are offered to the gods they are offered alone, whilst fruits are offered accompanied by salt.

Ordinarily any excess of salt in the food is at once got rid of through the kidneys and no harm results. A certain amount of strain must, however, be put on those organs if they are

habitually overworked in this way, and sometimes their power of excreting salt fails and we get the symptoms of chloride retention. The liability of the kidneys to this derangement differs much in different individuals, some are able to take enormous quantities of salt for long periods with impunity, but with others it is the reverse, especially if the kidneys are in any way diseased; the sodium chloride will be retained, and as it is not allowed to remain in the blood, it will be deposited in the tissues, where by the attraction it has for water, it will be the cause of generalized or localized oedema. The salts are excreted with the water by the glomeruli of the kidney, the convoluted tubes being concerned in the excretion of urea. The glomeruli normally excrete a solution in which the salt is in such proportion that the urine is isotonic to the epithelium of the convoluted tubes, i.e., it freezes at 0.78°C . This solution leaves intact the shape and histo-chemical reactions of the renal epithelium. If the functions of the glomeruli are so disturbed that they let through either a more concentrated or less concentrated urine than this, a urine that is hypertonic, or hypotonic to the epithelial cells of the convoluted tubes, those cells suffer and may be so damaged as to cease to function normally, with the result that there is albuminuria.

Dr. J. Cartaigne [3] relates an instance where a deficiency of salt produced albuminuria: "A medical student, who wished to experiment on himself the result of a dechlorinated diet, took for eight days exclusively boiled meat and bread without salt. On the fourth day he had traces of albuminuria, and when one of us saw him for the first time on the eighth day he eliminated 50 c. grm. of albumin, which completely disappeared when he returned to an ordinary diet.

The instances in which excessive salt has produced albuminuria are many; you will find one amongst the poisonings by *natrum muriaticum* in the "Cyclopædia of Drug Pathogenesis," and the injection into the veins of animals of large saline solutions, containing 0.7 per cent. sodium chloride, caused the passage of albumin in the urine.

This injurious action of salt upon the kidneys in certain people suggests caution in the use of normal saline injections, especially if there is reason to think the kidneys may be diseased. MM. Achard and Paiseau [4] made an autopsy on a woman in whom, to combat an internal hæmorrhage following hysterectomy there was injected under the skin in twenty-four hours 10 litres of artificial serum, containing five parts of sodium chloride and ten of sodium sulphate to the litre. Death occurred, and was due to pulmonary œdema. There was also considerable œdema localized in the renal pyramids, and epithelial changes were present in the tubules.

The following fatal case is related by Charles M. Combes, M.D. [5]: "Mrs. N., aged 35, underwent a vaginal oophorectomy. To prevent post-operative thirst and renal congestion the operator ordered normal saline solution by hypodermoclysis, 500 c.c. to be injected under each breast. By mistake a concentrated stock solution was injected. When seen four hours later the patient was unconscious. The symptoms not pointing to hæmorrhage, a search for the cause led to discovery of the mistake made. It was computed that the patient had received subcutaneously 1,920 gr. of sodium chloride, which had in the meantime become completely absorbed and diffused through the body. After six hours of coma a period of excitation followed; she was maniacal and talked incoherently, remaining in that condition until death, twenty-four hours after. Three hundred cubic centimetres of urine were excreted during that time which contained 11 grm. of sodium chloride, the normal amount for twenty-four hours. Evidently the kidneys were unable to deal with the excessive amount of salt brought to them."

Bengé [6] relates the case of an old man, the subject of arteriosclerosis, with renal sclerosis and aortic insufficiency, in whom a subcutaneous injection of saline salts, at 0·7 per cent., caused, on two different occasions, an attack of pulmonary œdema with intense dyspnoea, slight pain, subcrepitant râles, and crepitations.

M. Widal [7] has shown how, in certain cases of Bright's disease, one can, by prolonged ingestion of chlorides, cause at will large generalized cedemas, and how one can, only by withholding chlorides from the food, cause the cedemas to disappear. The very important paractical conclusion results that salt is a dangerous food for certain persons, the subjects of Bright's disease, who on the other hand, are benefited by withholding salt from the diet.

Widal [8] further says: "The chloride cannot be deposited in the tissues without attracting to itself water; where salt is deposited, there will be cedema present, so that variations in the chloridation of the organism entail variations in the hydration of the tissues, as is readily shown by periodical weighings. In the normal subject the variation in the amount of water in the body does not exceed 3 to 4 pints, while in respect of the chlorides the variation limit is about 5 drachms. Hydration, secondary to chloride retention, takes place in two stages. It is already far advanced when its existence is manifested by perceptible cedema. That stage is preceded by a period of progressive hydration, not associated with any visible sign. This may reach 10 or 11 lbs. Daily weighing reveals the existence of the pre-cedematous period, and enables us to foretell, with considerable accuracy, the probable date of the appearance of clinically-perceptible cedema. Manifest cedema that invades and distends the subcutaneous tissues is the least alarming feature of the hydration process. Vastly more injurious is the visceral cedema revealed by the scales. This visceral chloridæmia (chloride retention) may be manifested by dyspnœa, vomiting, diarrhœa, headache, Cheyne-Stokes respiration, attacks of eclampsia, according as the incubus falls upon the lungs, the digestive apparatus or the nerve centres. Even albuminuria may rise and fall in proportion to the amount of salt taken."

These facts with regard to the retention of salt in the tissues, with the accompanying cedemas, have given rise to the modern dechlorhydration treatment of renal disease, which aims, by the withholding of salt from the dietary, to get rid of cedemas of

the subcutaneous tissues and organs, which are one of the principal symptoms of kidney disease.

An illustration of this treatment is afforded by a case by Professor Lindsay [9], published in the *British Medical Journal* of July 10, 1908: "F. C. was admitted into Professor Lindsay's wards in the Royal Victoria Hospital on December 8, 1908, suffering from chronic tubal nephritis, accompanied by extensive and 'somewhat extreme œdema. The amount of albumin in the urine was large, viz., 1·6 per cent. The patient had no toxic or uræmic symptoms, but presented the signs of a moderate secondary anæmia. The œdema was the leading feature of the case. Routine treatment of the usual kind, viz., purgation, diuretics, hot-air baths, &c., was ordered and persevered with for many weeks with scarcely any appreciable effect. The patient continued much swollen, and the albumin, though varying in amount from time to time showed no progressive diminution. On March 6, 1909, a salt-free diet was prescribed, the amount of albumin being then 1·6 per cent. On March 14 the amount of albumin had fallen to 0·8 per cent., and the œdema was diminishing. On March 25 the albumin had fallen to 0·4 per cent., and there was progressive improvement in the œdema. When the patient left hospital the urine was still albuminous, but the œdema had wholly disappeared."

In some cases of Bright's disease there is a marked dissociation of the eliminatory functions of the kidney. The kidney may pass normal quantities of phosphates and urea and yet retain part of the chlorides. Whatever the degree of infiltration of the tissues and the gravity of the general symptoms, if the proportions of urea in the blood is approximately normal, or at any rate if it is less than 15 gr. per litre, we are justified in hoping much from treatment by a chloride-free diet: if, on the contrary, the proportion of urea exceeds 30 gr. per litre the prognosis is extremely grave.

In constructing a so-called salt-free dietary it should be remembered that so-called "saltless bread" and meat both contain no more than 8 gr. of salt to the pound, while milk

contains as much as 25 gr. to the litre. An exclusively milk diet will, therefore, contain a considerable amount of salt and will not serve the purpose. A mixed chloride-free diet represents about 20 gr. of salt a day. Chloride retention occurs in cardiac affections at the period of failure of compensation. Any ingestion of salt at this stage will increase the œdema and accentuate the general symptoms. [10] Cardiac affections may be classified thus: (1) The period of perfect compensation when the kidneys have normal power of eliminating salt; (2) the period of premonitory cardiac symptoms when the salt-eliminating function of the kidneys is easily upset and is imperfect for any excess of chlorides; (3) the period of complete asystole when the kidneys are unable to eliminate even the normal amount of chlorides.

The dechlorhydration treatment is not altogether without risk, for some cases have been reported where consequent on the stopping of salt in the diet in order to get rid of œdemas, re-absorption from the tissues into the blood has taken place faster than the kidneys have been able to eliminate the fluid and cerebral symptoms have supervened, such as torpor, delirium, muscular stiffness, relaxation of sphinctres, and even Cheyne-Stokes breathing. It is due to a want of co-ordination between the re-absorption and the urinary excretion, the polyuria not being sufficiently brisk, and occurs most commonly in old people the subjects of arteriosclerosis.

Sodium chloride has the property of modifying the toxicity of microbial excretions. Microbial toxins, when present, call for defensive action on the part of the organism, which issues in the attraction of sodium chloride to neutralize in part their morbid effects. The saline saturation involves, as a consequence, an accompanying attraction for water, and in this way the presence of toxins in the tissues causes œdema.

I have touched at some length on the dechlorhydration treatment because it has come into vogue during the last few years and is a useful addition to our means of combating certain

forms of renal and cardiac disease. It is also a good illustration of the effects which chemical substances can cause in the body, merely by their physical or physico-chemical properties. Some of these effects are very similar to those caused by natrum muriaticum when used in a high potency and acting dynamically. The same partial correlation between the physico-chemical and dynamic effects of a drug occurs in the case of carbo. vegetabilis, carbolic acid, kreosote ferrum, and other drugs. We, as homœopaths, rarely find occasion for the use of crude salt, or salt in high potency is one of our most valuable medicines. There are, however, a good many instances recorded in medical literature of the use of salt in its crude form for various diseases, and it may be of interest to relate a few of them. It is still more interesting to notice those instances in which the salt was given for the same diseases for which we have found it curative in high dilutions. The following extract from the *Medical Times and Gazette*, 1856, vol. ii., p. 375, affords a case in point: [11] "Dr. Moroschkin observes that, during the presence of scorbutus and ague in the Transcaucasian Provinces of the Black Sea, quinine sometimes entirely lost its powers. When no very prominent scorbutic affections were present he administered 1 oz. of salt in water, in two doses daily, during the absence of the pyrexia. * In patients in whom the paroxysms were incomplete very abundant sweating followed, the skin reassumed its normal appearance, and the various other signs of amendment followed, the disease becoming cured in a few days. In cases in which the improvement was only partial, quinine now became more efficacious. Of 103 cases, seventy were completely cured and the others ameliorated." A similar testimony to the value of salt in intermittent fever is given by a report addressed to the Paris Board of Trade by M. Willemin, late Sanitary Physician in the East in 1854: [12] "Common salt has well-marked febrifuge properties. In Damascus, this salt stopped the fever six times out of every seven cases; and even very small doses, as from two to four half-ounce doses in 6 oz. of water, were in most cases sufficient. This therapeutic agent is especially

valuable in anæmic individuals, upon whom the marsh influence acts most severely."

The same virtue is claimed for sea-salt in [13] a memoir presented by M. Piory to the Academy of Medicine in which it is stated that sea-salt is a good substitute for quinine in intermittents and acts equally energetically with this drug on the spleen.

In the cholera epidemic of 1832, salt was lauded as a remedy. Dr. George Beaman, M.R.C.S., of King Street, Covent Garden, wrote a letter to the *Lancet*, in which he relates that he had successfully treated eleven consecutive cases of cholera in its worst form by giving emetics of common salt. He says [14] "To an adult he gives three tablespoonfuls of common salt in $\frac{1}{2}$ pint of tepid or cold water: this produces vomiting in less than one minute, and the vomiting ought to be powerfully violent; such effect is followed by immediate diminutions of the cramps and very marked increase in the fulness of the pulse; the other symptoms are much amended, the voice becoming stronger and the muscular power greater."

In a paper read before the French Association and published in the *Revue Scientifique*, August 31, 1878, M. Howze stated that he had met with great success in treating wounds with abundant purulent discharge by means of a saturated solution of salt. He attributed its beneficial effects to its antiseptic action and to the density of the solution. If we place some pus and a saturated solution of chloride of sodium in a test-tube, the pus soon appears at the surface of the mixture. In the discussion that followed, M. Cabello of Madrid said that he had employed sea-water in the treatment of atonic ulcers with good effect,—a statement of interest to those of us who lately heard and saw M. Quinton to demonstrate the effect of *isotonic plasma* on chronic ulcers. Salt has also been used in the treatment of thrush in infants [15], as an external resolvent for indurated lymphatic glands [16], and in chronic ulceration of the cornea [17], in each case as a local application.

Dr. A. Bidder of Berlin says, the [18] *Practitioner* (1884, p.

298) argues that sodium chloride renders the tissues unfavourable to the development of the bacilli of tubercle and that in young persons with tubercular processes going on in the bones, joints, glands, lungs, &c., 3ss.-Si. of common salt should be given three or four times daily with the food. [19] Dr. George Hay advocated that chlorides should be given instead of iodides in chronic lead poisoning, and recommended that a drachm of common salt should be given three times a day. He contended that lead is eliminated principally in the form of chloride of lead or of oxide dissolved by chlorides, that is to say, Nature eliminates the lead by making it soluble in water and then removing it by the urine. Therefore, when we give the patient iodide of potassium, we simply render the lead less soluble than Nature would make it, and instead of hastening its removal we retain the poison in the body.

In view of our use of natrum muriaticum for headaches it is of interest to read [20] Dr. Addington Symonds' Gulstonian lectures on headaches, delivered in 1858. He says of headaches which have their source in disorders of the stomach or duodenum, commonly called bilious headaches, "I will only mention as a contribution from my experience of such cases, that long periods of exemption from returns of these headaches have occurred to patients who have faithfully observed my direction that they should drink a tumbler of common salt and water every morning an hour before breakfast." Probably the bilious headaches for which Dr. Symonds found this treatment beneficial had for their cause some disturbance in the part played by the salt molecules and would have been cured much more pleasantly by a few drops of natrum muriaticum 80. "Bilious" headaches often occur in persons who are disposed to rheumatic gout, and there seems to be some part played by the salt molecules in the production of this diathesis. [21] A doctor, Joseph Drew, M. B. Lond., who practised at Beckenham, sent an interesting letter to the *British Medical Journal* (1878, p. 689) in which he recounts his personal experience in ridding himself of attacks of gout and of crippled gouty joints by abstaining firstly from

alcohol and then from salt as a condiment, and by taking as little of it as possible in his food. And the influence of sodium chloride in stiffened joints, gouty or rheumatic, is further shown by the modern treatment of such joints by cataphoresis, whereby the chlorine ion of the salt is by means of the electric current disengaged from a solution of sodium chloride in contact with the negative electrode.

These are the principal uses to which salt has been put as a therapeutic agent by the orthodox school. In all of them it has been used as a crude substance or in strong dilution and in quite an empirical manner. Its employment has accordingly been partial and spasmodic. For its more extensive use, and for definite indications when to give it we are indebted to Hahnemann, who in his chronic diseases gave a pathogenesis of sodium chloride, comprising in the first edition of that work 897 symptoms, and in the second edition 1,349. These symptoms, Hahnemann says, were mostly obtained from healthy persons who took globules moistened with the thirtieth dilution. *Natrum muriaticum* was also thoroughly reproved by the Austrian Provers Society, and the provings may be read at length in the "Cyclopædia of Drug Pathogenesis." From the time of Hahnemann, it has been one of our best known and most frequently used medicines for diseases of a chronic character, and has often been brought forward as an illustration of the development of therapeutic power in a substance by the process of trituration, notably by [22] Dr. Burnett in his Monograph entitled "*Natrum muriaticum; a Test of the Doctrine of Drug Dynamization.*"—*The British Homoeopathic Journal*, April, 1911.

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(To be continued.)

EDITOR'S NOTES.

Cats as Plague Preventers.

Andrew Buchanan states in the *British Medical Journal*, that some three years ago he prophesied that "A few years hence we shall look on the neglect of the cat as one of the most extraordinary things in the whole history of our inquiries into the plague and its prevention," and that this prophecy is beginning to come true. While the author does not claim that direct infection never occurs, he holds that there is every reason to believe that plague is mainly due to rats. Poison and traps are ineffectual in disposing of the rats, which are sure to return. The theory that the plague is dying out is not sufficiently well founded to warrant any reliance being placed on that hope. In discussing the comparative value of cats and inoculation, the writer points out that the inoculation of the immense population of India every year or every time the plague threatens would be an impossible task at the present time. Although a knowledge of the value of keeping cats is spreading, there are many parts of India in which this is not fully understood, and the interval between epidemics should be utilized to impress the people with the fact that no other means of ridding a locality of rats compares with the rat destroyer provided by nature—the cat.—*The North American Journal of Homeopathy*, March, 1911.

Dysmegalopsia.

This is a term applied to defective visual recognition of the real size of objects, which are thought to be either larger (macropsia) or smaller (micropsia) than their normal dimension. In those cases presenting these defects there is no lesion whatever of the ocular apparatus, the media, the eye movement, the optic disc, and the retina being quite normal. It seems to be a purely psychical phenomenon, though no doubt there is an underlying change hitherto undetected in the cells of some part of the brain concerned in visual perception. The *Lancet* of October 29 calls attention to a case recorded by Dr. Liebscher in the *Monatsschrift für Psychiatrie und Neurologie* for August. The patient was an arterio-sclerotic of 62, with typical involution melancholia, including auditory hallucination. He complained that everything he looked at was shaking or vibrating, especially if his left eye only was used. Objects appeared to the patient smaller than they really were. The upper

parts of letters seemed to be broken and bent to the left, and sometimes the left side of any object appeared larger than the right. We have drugs which produce many of these conditions. Thus lycopodium causes objects to seem to vibrate, like heated air, hyoscyamus, nux-moschata, and onosmodium make objects appear too large; and aurum, glonoin, hyoscyamus, lycopodium, and platina too small; while belladonna makes them look crooked. It will be noted, too, that all the drugs have an influence on the brain, and produce many psychical symptoms. It would be interesting to know whether Dr. Liebscher's melancholic patient was taking any of these medicines.—The *British Homœopathic Journal*, March, 1911.

Beneficial Effects of Fragrance.

It may be advanced as a general truth that all sweet smells are conducive to health. At least they are harmless. Science has demonstrated in some detail the antiseptic properties of the essential oils of lavender, eucalyptus, clove, rosemary, and other plants; and their power to destroy bacteria has been tested with, in some cases, the most satisfactory results. We all believe, not without good reason, that the air of a sun-lit pinewood is not only pleasant to the nostrils, but is highly advantageous to health in the lungs and the arteries, from the development of ozone; and indeed, the statement may be ventured of fragrant herbs of all kinds that, wherever the sun shines upon them, they express (as has been, quaintly said) their *gratefulness* in health-giving ozone. Everybody knows the wonderful, because inexplicable, effect of lavender water, eau-de-Cologne, and attar of roses in driving off headaches, pacifying the agitated nerves, and invigorating the jaded mind. But even to robust people in steady health, the effect of certain odours is to stimulate the mental faculties and to give positive pleasure in their exercise. On temperament, too, they have beneficial influence. In counteracting or combating mental disease sweet odours may yet find a recognised place in practical pathology. In one of his *Essays*, Sir William Temple records the effect of a visit to the India House at Amsterdam. He and his party were among stores of all kinds of spicery (cloves, mace, nutmegs, cinnamon, etc.), and felt so revived and recreated by the aromatic fragrance all round them as to enjoy for a long time afterwards an exaltation of good health and good humour much beyond their ordinary cheerful experience. Thereupon

he wrote, lamenting the neglect of scents in modern physic. And John Evelyn was no less emphatic, and was even eloquent, in his advocacy of the odours of leaf and flower. It was he that soberly proposed to make London the healthiest and happiest city in Christendom by encompassing it with hedgerows of sweet briar, rosemary, jessamine, etc., and with plots of lilies, musk and marjoram—*The Homœopathic World*, March 1, 1911.

Ascarides Poisoning.

Santonin is a poison to ascarides, hence its employment in worms. But the worms themselves secrete a substance which is poisonous to human beings. Ascarides possess a repulsive odour, described as pepper-like, which becomes more marked after section of the worms, and produces marked toxic effects on some persons. Professor R. Goldschmide, of Munich, who is himself thus affected, has published an interesting note in the *Munchener medizinische Wochenschrift* of September 20. The symptoms vary in individual cases; they are irritation of the eyes with conjunctivitis and lachrymation, sometimes sneezing occurs which may be complicated with chronic naso-pharyngeal catarrh or with chronic cough. Professor Goldschmidt himself suffers with severe attacks of asthma occurring every night for a week, the attacks appearing regularly at the same time every night. Repeated attacks increase the susceptibility. When the œlonic fluid of ascarides is injected into rabbits in doses of 2 c.c. death occurs in ten minutes. Some persons are immune to these toxic effects, but most people suffer to some degree. If any of the body fluid of the ascaris comes in contact with a sensitive surface, such as the conjunctive, severe inflammation rapidly develops, and the hands may swell; but the minute particles given off in the air which conveys the odour are sufficient, as above mentioned, to cause the attacks of coryza or asthma, which have a remarkable resemblance to hay fever.

A chronic irritating cough is a well-known symptom of the presence of ascarides in the intestines, and the irritable condition of the nostrils is a diagnostic sign. These symptoms have usually been ascribed to reflex irritation of the pneumogastric nerve, but it would seem that they are caused more directly by the toxin excreted by the worm and absorbed from the intestines. We are not aware that the tissue juice of the ascaris has ever been given

for hay fever or asthma, but we think a trial should be made of it.—*The British Homœopathic Journal*, March, 1911.

£262 for an Egg.

The egg of the Great Auk is well known to possess a great value for collectors. The last specimen, sold in January of this year, had the not unusual romantic history of so many collectors' treasures, in that its early owners were unaware of its value. When it came to the London sale, however, it was a different matter. From a first bid of 160 guineas, the price rose to 250 guineas, at which figure it fell to Mr. Armbricht, a great collector, and better known to us as a member of a famous firm of Homœopathic Chemists.—*The Homœopathic World*, April 1, 1911.

The Contagiousness of Poliomyelitis.

An editorial in the *Medical Record* says that it is only a few years since this disease commonly, although improperly, known as poliomyelitis, ceased being considered as a simple degenerative process of the spinal cord and came to be looked upon as an acute infectious disease. To-day it is stated that poliomyelitis, or as Holt suggests that it be called "epidemic myeloencephalitis," is an acute contagious disease, and by many boards of health it has been included in the list of reportable diseases. This contagious aspect of the disease is emphasized in a recent article in the *Archives of Pediatrics*, in which Holt compiles the statistics of all epidemics which have occupied since 1907 and calls attention not only to the frequency with which several cases have been observed in a single family, but also to several instances in which the disease appears to have been carried by a third party and others where children have contracted it by entering an infected house at the time harboring an acute case. The evidence strongly supports the theory of direct contagion of the disease, and considering the terrible results of an attack, often even more pitiful when not fatal, and in the light of the danger from contagion by the so-called abortive cases which, occurring in conjunction with paralytic cases, may be easily overlooked, but one equally dangerous, it would seem wise, during periods of epidemics at least, that all cases of the disease not only should be reported, but should also be rigidly quarantined. *The North American Journal of Homœopathy*, April, 1911.

Typhoid Vaccination in France.

About a year ago the French Academy of Medicine appointed a commission to investigate and report on typhoid vaccination. Recently the committee reported, recommending the vaccination as "a rational means of diminishing the frequency and gravity of typhoid fever in France and the colonies." Dr. Delorme, Inspector General of the army, however, entered a vigorous protest against the report, based on his belief that the process was imperfect, the protection uncertain and the complications following undesirable.—*The Homœopathic Recorder*, April 15, 1911.

Inoculating the Army.

According to a press despatch over 1,200 men, a division of the army dispatched to the Mexican border, were inoculated with vaccine to protect them from typhoid fever. This may be medical science, but there are those who are inclined to believe that the plan adopted by the Japanese medical corps is better. The Japanese sent men to investigate and test the water, food and camp-grounds of their army, while the American medical scientists vaccinate and, presumably, assume that the men can drink infected water, eat bad food, have unsanitary camps, and escape all the consequences of these. These American army scientists are surely an optimistic lot of men, if they think a cause will not produce its effect. Typhoid vaccination at best is but an experiment, an unwise thing to make on an army that may be badly needed, and an unjust thing to the human beings who have no choice in the matter. The Inspector General of the French Army recently, according to a Paris letter, entered a vigorous protest against the practice.—*The Homœopathic Recorder*, April 15, 1911.

Small Pox in the Philippine Islands.

Our esteemed and always interesting contemporary, *Public Health Reports*, edited by the U. S. Marine Hospital Service, tells us how small pox has been almost done away with in the Philippine Islands. The entire credit is given to vaccination. Havana, Colon and Panam were noted for epidemic diseases until the American sanitarians set to work and cleaned them up, since when they are models of health. It would seem logical that the same work that was so effective in these places was equally effective at Manila,

and that the credit of the good health there should be given to the sanitary squad rather than to the cow-pox artists. This seems to be the more reasonable when one reads the weekly reports of small pox in Italy published in our official contemporary. For instance, in this very number Italy is credited with the cure of 221 cases of small pox and 145 deaths from that disease. Italy is as well vaccinated as Germany but, from all accounts, its sanitation is rather primitive, hence small pox, and several other things that grow up, where the sanitary squad is inefficient. Incidentally Japan, thoroughly vaccinated, had an exceedingly wicked epidemic of smallpox, due, they naively explained, to "neglect of sanitation." From all this comes the belief that the sanitary squad is not getting all the credit due to them. Washer-women, scrub-women, scavengers, white-washers and others of that ilk are the best of prophylactics against zymotic diseases and epidemics.—The *Homœopathic Recorder*, April 15, 1911.

The First Operation Under Ether in Europe.

One of the most dramatic scenes ever enacted in which medical men grouped the stage has been recently described by Dr. F. William Cock in the *University College Hospital Magazine*. It is the account of the first capital operation performed in Europe, when the patient had been rendered insentient by inhaling ether vapour. The story, striking enough in itself, for it tells of the realisation of what surgeons had vainly sought since surgery existed, has the added attraction that the compelling personality of Liston enhanced the interest of the occasion, while Dr. Cock's restrained, but vigorous, writing invests the narrative with due fascination. Dr. Cock tells us that Robert Liston had learnt from Dr. Boott, a general practitioner of Gower-street, that a successful trial of ether for a dental operation had taken place in his house on Dec. 19th, 1846. Liston at once sought the aid of Mr. Peter Squire, the well-known chemist of Oxford-street, and asked him to evolve an apparatus for administering ether. This was for use on the following Monday, Dec. 21st, for a patient in the University College Hospital. Peter Squire accepted the challenge, and at the suggestion of his nephew, William Squire, the ether inhaler, when put together, was tried upon the nephew. It was William Squire, who administered the ether to Liston's patient, profiting by his personal experience. The quaint operating theatre in the old hospital is crowded and William Squire essays to

test his ether inhaler on some volunteer patient. This is 1 p.m.; as no willing student presents himself, a hospital porter is commandeered and the experiment proceeds. Rendered excited but not anæsthetised, this man leaps from the operating table and runs amok through the audience of students, and is only secured just in time to save a worse happening. He is led away muttering that he would take no more of the "d—d stuff." At 2.15 Robert Liston enters, "that magnificent figure of a man, 6 ft. 2 in. in height." "We are going to try a Yankee dodge to-day, gentlemen, for making men insensible"—so Liston introduced ether to a London hospital. Dr. Boott had told Liston of Dr. Bigelow's account of Warren's trial of the anæsthetic at the General Hospital, Boston, Massachusetts, at the instance of Morton, himself one of the pioneers of this epoch-marking discovery. All is ready; Liston nods to his house surgeon, Ransome, who despatches Edward Palmer, the dresser, to bring in the patient from Ward I. The man is a butler, aged 36; he has a disorganised knee-joint and diseased tibia, and it is decided that the thigh must be amputated. William Squire places the mouth-piece between the lips of the man and clips his nostrils while ether is poured on the sponge in the Nouth's apparatus. Without a groan or a struggle the patient sinks into insensibility. "Liston stands by, trying the edge of his knife against his thumb nail." William Squire looks at Liston and says, I think he'll do, sir." William Cadge, Liston's junior, who became in later years one of the most distinguished of the hospital's pupils, is told to take the artery. Ransome, the house surgeon, holds the limb. "Now, gentlemen, time me," says Liston, and his knife flashes round the limb, deftly fashioning the flaps; then it is exchanged for the saw, and the amputation is complete. The time record is variously given—28 seconds, says Squire; 27 seconds according to Buckell, a whilom student who still survives; 26 seconds is called by "yellow-haired Russel Reynolds"; but 25 seconds by Palmer, the dresser, and upon him the great man smiles. The inhalation had been stopped as the operation was commenced, and the handkerchief which had been laid over the face is now removed. The patient tries to lift himself, and cries out, "When are you going to begin? Take me back, I can't have it done." He is shown the elevated stump, drops back, and weeps a little; he is taken back to bed to make a recovery, perfect if tedious, as recoveries were wont to be in the days before the voice of Lister had been heard in the land. Liston utters his epilogue thus: "This Yankee dodge, gentlemen, beats mesmerism."

hollow." Dr. Elliotson had been, of course, a physician in University College to within a few years of this time, and so Liston's bitter comparison is given with a spice of sarcasm. The notes of this case taken at the time are extant, and we read: "Not the slightest groan was heard from the patient, nor was the countenance at all expressive of pain. This was the first capital operation which had been performed under the narcotising influence of ether vapour and it was perfectly successful." The facsimile of Palmer's neat caligraphy and the portraits of Liston, Cadge, Squire, as well as diagrams of the apparatus, the operating table, and other details are given by Dr. Cock and bring the historic scene before one with an intense reality. Had the drug failed, as nitrous oxide had seemed to fail when publicly tried by Horace Wells in the General Hospital at Boston perhaps Liston might have echoed the angry cries of the students when they shouted "humbug" to poor Wells and broke his heart. Another scene, this time enacted after Liston's acceptance of anæsthesia, is the experiment of Simpson with chloroform in his own house. The details cannot be here rehearsed, although they are scarcely less thrilling. The net result of these happenings in 1846 and 1847 we know, and realise the part they played in the marvellous development in operative procedure which is our commonplace to-day. How far the modern feats are from the utmost possible attainment of even such giants in surgery as were Liston and Ferguson and those of their generation Dr. Cock reminds us, adding that within a year of the event chronicled Robert Liston had passed from life, dying at 53, as a result of an aortic aneurysm attributed in origin to a blow from the boom of his yacht. "Of him, truly may it be said: 'Ante diem perii, sed non sine gloriâ.'"—The *Lancet*, April 22, 1911.

CLINICAL RECORD.

Foreign.

TREATMENT OF CROUPOUS PNEUMONIA.

BY DR. LORENZ, STUTTGART.

On the 15th of May, 1908, I was called to see a lady, who, after having suffered, from a catarrh of the superior respiratory passages, had been seized with a severe chill and dyspnoea, followed by heat, in the night from the 4th to the 5th of May.

The patient, now sixty years of age, had always been sickly, and especially very sensitive to drafts; she had also frequently suffered from disturbances in digestion. Even before she was taken sick, her state as to nutrition and as to vigor had been much reduced. Her complexion, and her expression, as well as the laboured and much accelerated respiration at once made the impression of a severe case of disease. An examination of the thoracic organs showed dull sound in the percussion, extending to the middle of the shoulder-blade, at the same time weakened respiration, with a breathing sound at expiration, and rattling noises. The rest of the lungs was unencumbered. The heart did not show any enlargement, the sounds were clear, the pulse 100 to 110; easily compressed. The respiration was superficial, accelerated, 30 to 35 a minute. The temperature taken in the middle of the night in the axilla was 39.7. The tongue showed a thick, white coating, the skin was somewhat moist, the urine brownish yellow, somewhat turbid; the expectoration tough and rust-colored.

Of medicines the patient had taken of her own accord *Aconite* and *Bryonia* 30, one dose of each. She now received *Ferrum phosphor.* 6, three drops every two hours. The day passed without any further aggravations, but the following night was very restless, and the patient was, in consequence, very tired in the morning. Rather disquieting was her steady refusal to take any nourishment. The dulness had increased in its extent upwards, and had, on the whole, become more intense, the respiratory noise had become loudly bronchial; at the edge of the dulness crepitation could be noticed. The frequency of the pulse had also increased somewhat. The sensory was clear, at least during the day. I now gave the patient *Sodium* 3, giving her three drops dissolved in one-tenth of a liter of water, of which she took a tablespoonful every two hours. The following night was de-

cideily more restful, the temperature was somewhat lower, the coating of the tongue was less thick, and the appetite improved.

An examination on the forenoon of the 8th showed signs that the resolution in the lobe of the lungs affected had already begun. The pulse had again gone back to 110, and the general condition was decidedly better. In the course of the day the fever broke, thus on the fifth day of the disease. The resolution in the lung proceeded quite rapidly, and her recovery proceeded undisturbed.

II. Mrs. Sch., seventy-three years of age, living in the country, came under my treatment on the 12th of July, 1908. With the exception of a catarrh on the chest that returned every winter, she had always been healthy and able to work.

Three days before my call, she was taken with a shaking chill, followed by a bloody-colored, tough expectoration, with dyspnoea and pains in the right side, in the back, and in the region of the lower ribs. She made the impression of being severely sick. The respiration was short about forty in the minute; the pulse had a frequency of 110, with large waves; the tongue was dry, the sensory was obscured. On the right side there was dulness up to the middle of the shoulder-blade; and bronchial respiration; on the left side there was vesicular respiration, with copious rattling. The heart is not enlarged; the sounds are clear. The urine is saturated, temperature 40. Prescription: *Bryonia* 6 and *Jodium* 3.

During the two days following, the dulness became still more intense, and also extended itself somewhat upwards. There was an increasing somnolence, a bluish discoloration; the darkly livid color of the tongue, and the increase of the frequency of the pulse up to 120, caused quite an alarm. But this proved to be height of the disease. Next day, on July 15, the temperature in the evening did not rise as high, and in the night it sank very rapidly. Towards the morning of July 16, the patient fell into a sleep from which she awoke refreshed. The slight irregularity in the pulse was quickly stopped by *Kali phos.* 3. *trit.*, and the expectoration was advanced by *Tartar stibiat.* 6. Her recovery proceeded steadily and quickly, so that in two weeks she could travel back home.

III. On October 29, I was called in to see a patient who was seventy-five years of age, who had been taken sick four days before with chills, cough and an expectoration of bloody color, and with lancinating pains in the region of the left shoulder-blade. The patient had not been afflicted before by any severe disease, and

evidently did not think much of the attack, and with admirable energy kept going about, until her increasing weakness made it impossible. When I first called on her, she did not yet make the impression of being very sick. Her respiration was, indeed, accelerated, but not labored; the pulse showed 90 to 100 beats, and was regular. The heart was not enlarged, the sounds were clear. Over the left lung there was dulness and bronchial respiration extending up to the lower third of the shoulder-blade. The tongue was dry, the urine dark colored, the temperature in the evening 39.2, and the expectoration of bloody color and tough. The patient received *Ferrum phosph.* and *Scilla* 6, in alternation. Next day there seemed to be an alleviation, the temperature went back 0.5, and on the lobe affected there was a fine rattling noise, the bronchial respiration was diminished, the pulse somewhat retarded, the night more restful. Still this had only seemed to be the crisis. The temperature, indeed, remained below 38, but the pulse was accelerated and became irregular, the respiration more difficult, and the general impression was not that of convalescence. *Kali phosph.* 6 trit., moderate doses of wine, and Puro did not suffice to stop the decrease of her strength. The pulse increased in frequency up to the next day. The dulness of the heart extended on the right side to the middle of the sternum. On the left lung a new infiltration had formed in the upper half, while the lower half had remained the same. It was, therefore, manifest that the process was extending in the lung although the temperature had fallen. I therefore gave in alternation *Kali phosph.* 6 and the tincture of *Strophant*, and also *Jodium* 3, but without any result. The pulse increased in frequency and the strength decreased, and on the twelfth day of her disease, the eighth day of her treatment, death ensued.

The ill results in this case may be ascribed, first of all, to mistakes in her treatment before I was called in. In spite of her fever, the patient had not taken to her bed, and had hardly taken any nourishment during these days, so that her strength was already much reduced at the beginning of the disease. I cannot see that there appeared to have been much effect on the disease from the medicines, and under the circumstances this was hardly to have been expected. It was quite different in the other two cases. In these cases I have a distinct impression that the course of the disease was favorably influenced by the use of *Iodins*. I know very well that two cases are not sufficient to prove anything, because

in judging of effect and cause not all the unknown causes can be eliminated. But if we view not only the final effect, but all the single phases of the disease, the favorable effect of *Jodium* becomes much more probable. An improvement of the sleep, of the coating of the tongue, of the appetite, all appeared right after giving the *Jodium*, even before the diminution of the fever and the crisis took place. So also the absorption of the exudation followed very rapidly, although the case was that of a patient with indolent power of reaction. Also in the second case, which from the start showed very serious symptoms, and which extended over the whole of the lower lobe, according to my experience without the use of *Jodium* an unfavorable result might have been expected, and it is surely not by accident that after two days use of *Jodium* the improvement set in, followed on the third day by the fall in the fever. If we should succeed in aborting the course of croupous pneumonia by *Jodium*, where this is Homœopathically indicated, and thus to confirm the statement made by the well known *Kafka*, which, to me, has hitherto seemed rather venturesome, then, also, in this disease, the superiority of Homœopathy over the old school would be plainly evident.—The *Homœopathic Recorder*, May 15, 1911.

A CASE OF APPENDICITIS.

BY FRANCIS J. WHEELER, M.R.C.S., L.R.C.P.

A. W. Age 5. Female. The child had been ill three days before medical aid was sought. On examination, T. 102°, pulse correspondingly quick. The patient was lying on her back with her right leg slightly flexed and complaining of much pain. The hip joint was apparently free from any disease. The skin over the region of the right iliac fossa was red and inflamed; and over the same area there was considerable tenderness on palpation. On making a rectal examination some fulness was found together, with marked tenderness. The respiratory movement of the abdomen on the right side was impaired.

Clinically the case was one of appendicitis, but the totality of the case (including flushed face and dilated pupils) was *Belladonna*. *Bell.* 30 every three hours was prescribed. When seen the next morning the child was in less pain and the bowels had acted naturally. The bowels had been constipated and had not acted for three days. During the day vomiting began and the child could only keep down soda-water; warm fluid was vomited immediately. Until I found out that fact from the mother, I was unable to find a remedy which gave any relief from the sickness. A few doses of *Phos.* 30, then stopped the vomiting. Some pain remained which was > by hot applications and > by doubling up. *Colocynth* 30 relieved the abdominal pain and the case then made an uninterrupted recovery. A point of clinical interest was some thickening which remained, and could be felt both abdominally and per rectum, and which I think leaves little doubt that the diagnosis of appendicitis was correct. This case illustrates the fact that the name or label by which any disease is known has very little to do with the indicated remedy. So many cases are spoiled by thinking allopathically instead of in accordance with the teachings of the Masters of Homœopathy.

2. A CASE OF CHILBLAINS.

S. H. 38. Housemaid. The patient consulted me last November on account of troublesome chilblains. Her health was generally very good. She had suffered from severe chilblains on her hands and fingers for the last six years during the winter months.

Symptoms of the case :

Extremities. Chilblains on fingers and hands. Hands swell and burn, < winter, > hot water for a time, < after, > warm room > night, < day.

The fingers "split and then heal up if left alone."

Cold feet and hands.

Face. Hot flushed face after food.

Stomach.—Aversion to fat food, Heartburn, < fruit; < jams, especially raspberry.

Headaches.—Forehead and temples. Tight sensation across forehead.

M.P.—Nothing abnormal.

Mind.—Nothing characteristic.

Treatment.—*Petr. Cm.*, one dose, November; *Petr. Cm.*, one dose, December.

The patient was seen again at the beginning of January. The hands were quite normal then, and have remained so since, although the weather has been cold and frosty at intervals.

Calcarea Carb.—An interesting experiment.—Some lady friends of mine were recently concerned to find that their fowls were breaking and eating the eggs; three or four being found broken daily. It is, I believe, usually stated to be impossible to break them of this habit when once it is commenced. The hens were laying badly, and the egg-shells were thinner than normal. The idea occurred to me that the fowls were probably lacking in shell-forming material, and I suggested as an experiment that some *Calc. Carb.* should be added to the drinking water. Three drops of *Calc. Carb.* 30 were added to a gallon of water once a week. That was six weeks ago and the following results were obtained :—

(1). Two eggs were found broken the day after the first dose of *Calc. Carb.* had been given, but no attempt had been made to eat the shell as on former occasions. The shells of the broken eggs were thin, and had apparently given way from being trodden upon. Since then no eggs have been broken or eaten by the hens.

(2). The shells have been thicker; in some instances unusually so.

(3). A week after the commencement of the experiment a curiously-shaped egg was found in one nest. In shape it resembled the old-fashioned egg-timer. It was roughly two-and-a-half inches in length, three-quarters of an inch in breadth either end, and constricted in the middle. Its shell was markedly thick.

(4). A very marked increase in the number of eggs produced has taken place.

It would be of interest to know if similar experiments have been tried before and with what results.—The *Homœopathic World*, May 1, 1911.

Gleanings from Contemporary Literature.

ARE THERE MEDICINES FOR TUBERCULOSIS?

BY W. A. SHEPARD, M.D., COLORADO SPRINGS, COL.

A few months ago, the writer enjoyed a trip through the East, visiting some of the larger sanatoriums for tuberculosis, and was very much impressed with the care taken in diagnosis. The blanks used for diagnosis were very complete and elaborate. They included the history of the grandparents on both sides, the uncles, aunts and cousins, the father and mother, brothers and sisters, in a search for any possible evidences of tuberculosis in these various branches of the family. It also included a careful history of the patient from childhood, going into the various diseases and their effects. After this very careful examination we found on each examination blank a very small space allotted to treatment. After looking over several of these blanks, and failing to find any jottings under the head "Treatment," we questioned the superintendents to know what medicines were used, and where the record was kept of these remedies. They were all agreed that there were no medicines for tuberculosis; that no matter what conditions they found, they did not administer medicine, unless perhaps a patient needed calomel or quinine or tonics of some sort.

The patients were put in bed and kept there if the temperature was 99° or above. The general prescription was out-of-door life, a generous diet of the best of food, and liberal lunches of milk and eggs. Tuberculin was used in some cases, but with unsatisfactory results. This seems to be the general feeling in regard to tuberculosis; and it is not to be wondered at, for in looking back over the history of tuberculosis for centuries we find that the treatment of the disease has been a continuous failure. Occasionally a case was cured by some means, but when the same means were applied to a hundred other cases it failed. The disease is a destructive one, taking the lungs out of the chest, little by little, until insufficient sound tissue is left to support life. It is no wonder that physicians looked upon the disease as one that would remain incurable. It has been pronounced incurable for centuries, by the very brightest physicians that have lived before us. For this reason, it had become unpopular for any physician to try to do anything for tubercular patients more than to give them tonics and make them as comfortable as possible.

Now we can see that it was all a mistake, and that if the same interest could have been taken by physicians a hundred years ago, or even fifty years ago, as has been taken during the last five years, thousands of lives might have been saved, and the treatment of tuberculosis would have been greatly advanced. However, it is possible that the treatment of this disease was not as intelligent and successful as was the treatment

of other diseases, for we find that blood-letting, cathartics and blistering were very frequently used. The writer can very well remember when tubercular patients were treated unmercifully with most noxious doses; when cathartics were freely used to carry off the disease through the bowels; when blood-letting was employed to reduce the fever, and when the most horrible blisters were applied to the chest for the purpose of drawing the disease out through the chest walls. It is not surprising that a change has come about, and that now almost no medicine is administered to those who suffer, just as they did fifty years ago, with night-sweats, fever, and all the other phenomena that go to make up consumption. We believe, the pendulum has begun to swing the other way. Physicians recognize the fact that medicines *can* do good, and that patients are never injured by the use of the indicated remedy. We believe that in all classes of disease a rule will be established, after a while, that a medicine shall never be used unless indicated, but only those medicines shall be used for tubercular patients, or any others, that will do good and not harm, and medicines that will be pleasant to take and not noxious. This is our prediction.

Tuberculosis is a disease that is made up of a vast number of symptoms, due to toxic and pathological conditions. The fever of tuberculosis is a sepsis, due very largely to the absorption of purulent matter from the lungs into the circulation. When the lymphatic system, or any other part of the body, happens to be the seat of the disease and begins to break down, fever is sure to occur. It is also very apt to appear at the period of invasion. And why not prescribe medicines upon these symptoms and control the sepsis, just as we would in childbed fever, or any fever of the kind, or as we use measure to control typhoid fever and keep it in check? Why not use the same methods, changed, of course, according to the symptoms and pathology of the disease? The successful physician, when called to a patient suffering from any form of disease, takes into consideration *all* the symptoms and pathology of the case. Then he makes up his mind as to what remedy will control all the symptoms best. Sometimes he prescribes for a single group of symptoms, controlling them, and then makes a re-study of the case, and controls the next group of symptoms that are the most prominent, and so on until the disease is mastered. So in treating tuberculosis, the symptoms that show most and are most prominent are the ones to be controlled as soon as possible. For instance, if a patient has night sweats, there are remedies to control them. There are remedies that will control the fever to a certain extent; but both of these symptoms depend upon the pathological conditions that we find. This is also true of the emaciation, and of the symptoms that come from a deranged liver; for we find, as soon as the lung becomes diseased, the liver is overworked, and then we have added to the complex, the symptoms due to an inactive and diseased liver. These can be taken into account and helped very much, indeed. We find, also, that the heart is overworked, and that

certain symptoms develop on that account. So we must take care of the symptoms that are due to an overworked heart. Heretofore physicians have claimed that it was impossible to control these symptoms, on account of the destruction going on in the chest, but this is not true. Homoeopathic physicians are more successful in treating symptoms connected with tuberculosis than are other physicians, because they treat upon a symptomatic basis, and they can in a good many cases control the disease when it is in its acute stage, and keep the patient alive until the disease becomes chronic. So we frequently find in homoeopathic practice cases of tuberculosis that have become chronic, and they live along for years in comparatively comfortable health, losing a little every year, until they finally succumb to the disease.

All the remedies that are indicated in the treatment of tuberculosis have been very thoroughly studied, and their general uses discussed in the journals, but perhaps not with a view of their use in this special disease. The remedies we find most frequently indicated are Aconite, Verat vir., Baptisia and Gelsemium when fever is prominent; Arsenicum iodat., Tartar emetic, Hepar sulph., and Merc. sol. for the diseased pathological condition of the lung; Sulphur, Calcarea carb., and Silicia for constitutional symptoms; Atropia, China, Hamamelis and Iodine for night sweats; Ipecac, Aloes, Nux, Bryonia, China, Merc. cor. or Merc. sol. for the bowels. A close study of these remedies will aid a physician in controlling the symptoms that show themselves in this disease.

Prescribing for tuberculosis is more difficult than in many other diseases, on account of the destructive nature of the disease, its obstinacy, and the complication of symptoms that arise. Our great object has been to reach results, and do it as quickly as possible; so we have prescribed in our treatment of tuberculosis such remedies as have seemed to us best for the patient, without regard to any "pathy" or "ism," or anything else. The good Lord has given us a great variety of remedies as well as a great variety of diseases, and out of this great variety of remedies the close student of materia medica can select not only the remedy, but the potencies. Our experience has been that the lower potencies are the best in this disease, although we occasionally find symptoms so clear cut that we can prescribe the higher potencies with success. The great aim is to check the progress of the disease, and this can be done to a very great extent by a close study of the symptoms themselves; for, as we have said before, the disease is made up of a train of symptoms that arise from the destructive condition that is going on in the chest. The writer has no desire whatever to discuss potencies. Every physician must be a law unto himself, when it comes to prescribing for tuberculosis, for he will find that no disease requires as careful prescribing as does tuberculosis, and there is no chronic destructive disease in which he can reap as great results.

One remedy that has never been studied carefully for tuberculosis, and

the remedy that is particularly indicated in that disease, is oxygen. Take a strong, healthy man, and shut off part of his air, and he will begin to lose flesh and strength; he will become pale; and if the lack of air continues for months, he will become badly emaciated, and acquire many of the symptoms of tuberculosis. This is demonstrated very frequently among miners who have to work in air made impure on account of lack of oxygen in it, and also on account of the increased carbonic acid gas. We also find in tenement districts people who are living in air deficient in oxygen and loaded with poisonous exhalations from their crowded condition. Now suppose the air is shut off by having tubercular deposits occur in the lungs from some cause (and the causes are numerous). What happens in this case? The patient fails to take into his lungs the amount of air necessary to maintain his strength, the blood loses its oxygen, the hæmoglobin becomes deficient in its supply, the patient begins to lose his vitality and strength and flesh, and as the deposit increases, and the disease extends into the lung tissue, the blood becomes more and more impoverished, so far as the amount of oxygen in the hæmoglobin is concerned, and we find all the symptoms of tuberculosis; and these symptoms are due to a lack of oxygen. As to just what changes occur in the blood from lack of oxygen, we do not know; and just why it is that bacilli will remain in the lungs when there is a lack of oxygen in the lung structure, we do not know; we simply know that it is true, and that nothing so far has been found to check the spread of the disease through the lungs. Looking upon tuberculosis as a disease due to a lack of oxygen, and believing, if the proper amount of that element could be supplied to the blood, that the disease was curable, the writer has for many years experimented with the use of oxygen in this disease, with the most gratifying results. We believe that oxygen is indicated more than all the other remedies combined; that it meets not only the symptoms of the disease, but also the pathological conditions; that it is the only remedy that will cure the disease; that since the disease is plainly due, to a very large extent, if not entirely, to a lack of oxygen in the blood, the rational and sensible thing to do is to restore that element of the air to such an extent that the patient shall take into the circulation as much oxygen as he would, if the lungs were perfectly healthy.

By following this up, we have found that in most first stage cases all the symptoms of the disease disappear in a very short time; that in second-stage cases the bacilli disappear in from one to two months, and in advanced cases, where there are cavities, with no laryngeal or bowel complications, the bacilli will leave in from three to four months. Of course, this sounds like an astonishing statement, but we have proved it, and it is due to the fact that bacilli cannot live in oxygen. Oxygen is the only thing so far, that can reach them through the circulation, and while it is reaching the bacilli, it makes the blood so resistant that it is impossible for the bacilli to find any culture fields in the lungs. In

other words, they cannot live in the system that is saturated with oxygen. Abundant clinical observation proves this to be true.

The process of healing the lungs after the bacilli have left them is another matter, and is largely influenced by the constitutional and other effects produced while the disease has been progressing. If it were as easy to heal the lungs as it is to get rid of the bacilli, the time for curing a case of tuberculosis would be greatly shortened. But here, again, is where proper prescribing comes in, for in order to heal the ulcerations and the diseased condition of the lung, the proper remedies, combined with the use of oxygen, must be employed.

Oxygen has not been considered a remedy for any disease, and neither has nitrogen, nor any other element of the air. Patients have been instructed to take long, deep breaths so as to take large quantities of air, but this often brings a too severe strain on the lungs, and may bring on a hemorrhage or extend the disease. Patients are advised to go into the mountains and live in high altitudes, because there is so much less oxygen in the air there, and the patient will have to breathe so much the more deeply in order to get all the oxygen he requires, that the lung tissue will be strengthened thereby; and by breathing the rare, dry air and taking forced diet, the disease is sometimes brought under control, the patient's life extended for a good many years. But this does not bring about a cure; it simply checks the disease, and in a good many cases aids nature to throw out a lymph that encapsulates the diseased areas, if they are not too large, and brings about what is called a cure. As long as the patients remain in the open air and keep up a general condition of good health, the encapsulations remain firm and strong, enclosing, as they do, the bacilli and purulent matter. The patient is free from cough and all the symptoms of tuberculosis, except that in most cases they do not regain their strength and vigor, for the bacilli, even in an encapsulated state, insure a lack of vitality as long as the patient lives. If, however, the patient should suffer from any disease that brings up a high temperature, these encapsulations are very apt to break down, no matter how perfect they may have been, and no matter in what climate the patient may live. In this case the bacilli are set free to spread through the lungs like wildfire. All of us have had experience in cases of this kind, and know how much more quickly the patients will die when these encapsulations open and set the bacilli free.

The great study, then, as we look upon it, is a study of oxygen; for, as we have said before, while the indicated and closely prescribed remedies will check the disease to a certain extent, as long as the bacilli remain in the system the pathological conditions upon which the symptoms depend will continue in spite of all the medicine that has yet been prescribed.

In an article written by us for the *Medical World*, September issue, we took the position that a cure of tuberculosis has not been made when the diseased areas are encapsulated. We hold that a healthy cicatrix should be formed instead. The editor, however, took exception to this

position, and claimed that if the areas were encapsulated the patient should be considered cured. We find, however, in our experience in treating tuberculosis a great many cases that have changed climate and have failed to be cured by encapsulating the diseased area. The reason is that the disease has broken down areas in the lung tissue that are so large that nature, no matter how she may be aided, can not throw out lymph enough to cover them. Those patients who recover by a change of climate and forced diet are those who have not been seriously affected by the inroads of the disease, but who have a good many small diseased areas scattered through the lung tissue cases, if the digestive function is good and the patients remain in the high altitude, where the air is dry and cool, they may live for years in a very comfortable condition of health. Some of them, after spending five or six years in the high altitude, can go into the lower altitudes and live until, unfortunately, they are taken with some disease that induces temperature. Then, as we have said before, these encapsulations break down. In our use of the oxygen treatment we do not have that difficulty. We have had under our control a good many cases where the encapsulations will break down after the treatment is begun, and healthy cicatrices will form, leaving all the lung tissue that remains in the chest astonishingly good, and the patient being freed from tuberculosis, can live in any altitude, just as they would, if they never had the disease.

The question of method and the best means of employing oxygen is a very important one. But before applying any method we must have a clear conception of the problem that confronts us, and this, in a simple, comprehensive way, is the way it presents itself to our mind. As soon as a tubercular lesion occurs in the lungs, no matter from what cause, and no matter how shall the lesion may be, it interferes with the operation of the lungs to an extent altogether out of proportion to the size of the lesion. We find this true in pleurisy and peritonitis. The result is that in the case of affected lungs they do not expand so as to press against the diseased area. Consequently the whole lung is affected in its operation, and does not take in the amount of air that it otherwise would. We find that a vast number of the air cells are not in use, and a vast number are only partially in use. All are working feebly.

We also find that as the diseased portion of the lungs begins to break down, the residual air, coming in contact with the diseased areas, becomes poisoned, and its presence in the weakened lung tissue increases the possibility of the spread of the disease, and makes these portions of the lungs a culture field for the bacilli. In this way there is no doubt but that the disease is spread through the lung tissue. We find that the mucus and matter discharged from the diseased areas are drawn down through the bronchioles into the healthy portions of the lung tissue, and a good many air cells are filled up with this pus and broken-down tissue, and while they are not destroyed, they are useless. We find, also, consolidated areas as the disease progresses, where the air cells coalesce

and form solid masses that are not yet broken down, but are simply unused. We find in some cases that inflammation will follow in weakened lung tissue, and fibrous deposits will occur that in time break down. We find, in looking at these diseased lungs, that one lung, or one lobe of one lung, may be in the first stage, or stage of deposit, while another may be in the third stage, or cavity stage, in which the lung structure has been destroyed.

No wonder, when we come to look at it in this way, that this problem has heretofore been considered an impossible one, in which nothing can be done; but when we look upon it as we do, with a view of applying oxygen and other medications to this condition of things, it does not seem so impossible; and our experience has been that it is possible to arrest the disease and save all the lung tissue that is left when the treatment begins, unless, as we have said before, serious complications have arisen, or too much destruction of the lung tissue has already occurred. The great difficulty heretofore in using oxygen has been that physicians have felt it should be used in unnatural quantity. That is, they expect their patients to breathe pure oxygen gas, which is very irritating and unnatural. If old Dame Nature is to be helped, she must be helped in her own way, and nature never provides pure oxygen alone for the lungs, and never provides it in larger quantity than it is found in the air. Taking our clue from nature, then, it would be very interesting and instructive to know just how much oxygen a perfectly healthy man, with a given vital capacity of the lungs, would absorb from the air in a given time; and then to decide just how much this man is taking, if the lungs become diseased, in the various stages. This, of course, is plainly almost impossible, because the amount of oxygen absorbed into the circulation depends upon the amount of work done by the muscles and upon the amount of work done by the brain. We do approximate in our method so closely that the patients show the effect of the oxygen in a very little time. We have to be guided by the condition of the patient as to the amount of oxygen he should use; so we dilute it for each individual case.

We have found, in the course of our years of experimenting, that no matter how carefully we apply the oxygen, it does not seem to stimulate the elimination of carbonic waste that occurs in the system, but by using it in combination we can stimulate this process of elimination from the lungs to bring about practically the same result that nature obtains during the process of endosmosis and exosmosis. In other words, the study of the use of oxygen must include in it the study of every process and condition connected with respiration; and this must be with a view of aiding nature, and not forcing upon her means and methods she can not adopt. The result of thus aiding nature, in our hands, has been what it must be in the hands of any physician who will apply the methods, or improve upon them, that of reducing the fever and night sweats in a very short time. We have had patients come to the

Tent Cottage Homes who had, for perhaps two or three months before coming, been carrying a temperature of 102° to 104° , with chill and fever every day and a night sweat every night, and losing flesh rapidly. The fever is quickly reduced, the chill stopped and night sweats cured entirely within three or four days from the time of applying the oxygen method. We have seen them almost immediately stop losing flesh; and they begin to gain flesh rapidly if the digestive and assimilative functions are normal. We do not advocate forced diet, but expect patients, in a very short time after they begin treatment, to acquire a satisfactory and natural appetite, calling for substantial articles of food, and taking all that nature requires.

It is not uncommon at all for us to see patients whose diet has been forced, and who are carrying more flesh than the lung tissue could furnish oxygen for, when taken off from their forced diet of eggs and milk, to lose flesh until the amount corresponds with the amount of lung tissue actually in use. Then we have seen patients, after coming to a normal appetite, gain flesh in proportion to the improvement in the lungs. In fact, this is the rule with all our patients; that the flesh increases in proportion to the improvement in the lung tissue. It is not uncommon for physicians to see in patients who have been under athletic training in colleges, whose fat has been trained off and whose muscles have become large and strong, that the lung tissue has developed in proportion to the muscular structure. In fact, it is a rule that the lungs will increase in capacity in proportion to the development of muscle. We have seen those same athletic men discontinue their training and adopt some sedentary life, and begin to lose their muscle and take on fat. At the same time, the capacity of the lung decreases in proportion to the decrease in the muscular structure, and the unused portion of the lung becomes a culture field for tubercular bacilli.

Now, suppose the young athlete should have an attack of la grippe, with its deposit of serous fluid in the lung tissue; or if he should have a bad cold, with its process of inflammation through the bronchial tubes and brouchioles, he is in the right condition for tubercular deposits to occur, and they are very apt to do so.

We have now in mind a young man who had gone through exactly this experience in one of the southern colleges, and came here in advanced second stage of tuberculosis, with an abundance of bacilli and profuse expectoration, and with a large area of dullness, showing deposits in various portions of the lung structure. He had lost a good deal of flesh, and seemed almost a hopeless case; but after a while he began to improve and in about six months returned to his home in the South well. The tubercular bacilli disappeared after the third month. This was in 1905. During the summer of 1910 he passed through a siege of typhoid fever, losing his flesh, but he recovered it again in a perfectly natural way, and has shown no sign whatever of tuberculosis. This has been our experience with these athletic people, and with the administration of the

oxygen method, unless cavities have formed. In that case they are very much more difficult to cure than are any others. There is no question at all but that we can make a large amount of good blood if the digestive and assimilative organs are in good condition; but this blood must be purified in the lungs, and if the lungs have lost their capacity for taking in air, the blood can not be purified, for oxygen is the great purifier.

A very large per cent of the patients we take are those who have spent more or less time in the various sanatoriums, and under various treatments that have for their object the encapsulating of the diseased areas. One case comes to mind that will illustrate the difference between bringing about healthy scars and encapsulating.

A young man came here several years ago with tuberculosis, and was apparently cured by the climate. He regained his flesh and strength, but feeling afraid to go into a low altitude, he kept himself in the Rocky Mountain region working all the time. He said he never felt really as strong as he did before he had tuberculosis, but still was able to work and was free from cough, until he came here visiting about five years ago. Soon after coming here, he was taken with la grippe. After la grippe a cough came on, and it seemed so much like his original cough that he and his friends were very much worried about it. Upon examination of the lungs we found small, dull areas through the upper lobe of the left lung and through the central lobe of the right lung, and some of these areas had evidently broken down, as there were rales and the sputum was loaded with bacilli. After being under treatment for a month or six weeks the bacilli disappeared and the cough was very much better. But then other areas broke down, discharging purulent matter and bacilli that fairly covered the slides. This lasted for only a few days, when another interval of apparent health followed; then came another breaking down of encapsulated tissue, with abundant bacilli and purulent matter. This process was frequently repeated from April to November, when his lungs seemed perfectly clear. He had regained his former weight and health, and was pronounced well and free from tuberculosis. He went into a low altitude, where he remained for several months. He had occasion to come here again, and I examined his lungs and found that all the lung structure in his chest was perfect. The vesicular murmur was especially good, and the lungs seemed strong, and were very unlike what they were when the first examination was made. He has now been in a low altitude, working on a farm, for about two years.

This experience of ours has been repeated over and over again, and shows the difference between an apparent cure from the influence of the climate and forced diet, which means an encapsulating of diseased areas, and a cure brought about by the use of the oxygen method, which is certainly the way nature is to be helped to bring about a cure. We might give a vast number of these cases, but they would only illustrate the effect of the treatment upon different forms of tuberculosis. In conclusion let us say that until recent years there has never been any

inducement, whatever for a physician to put time and money into the study of tuberculosis, and had it not been for the liberal support given by the governments of the old countries to original research, we might still be looking upon tuberculosis as incurable in all its stages. It is true that, now the field is opened, a great many physicians are experimenting along the lines of original research for the purpose of finding a cure for tuberculosis; that thus far these experiments have been along the line indicated by Koch when he discovered the bacilli and said he hoped the discovery would lead to a cure for tuberculosis through the use of Tuberculin, or words to that effect; that Tuberculin has been tried most faithfully, and other medicines by the hypodermic method have been tried most faithfully, with a view of destroying the bacilli; that since the bacilli are so largely albuminous and so hard to reach, it has been impossible to affect them without destroying the albumen and other portions of the blood; that the use of oxygen, for the purpose of putting the system into such condition that the bacilli can not live in it, had not to our knowledge been undertaken on an extensive scale until we began experimenting with it, for we found that the bacilli can not exist in a system that is abundantly supplied with oxygen. In our hands this method has been eminently successful, and has been the means of curing a great many cases that are living and have lived in their old homes, surrounded by the old surroundings, and have not re-acquired the disease.

The field for the use of oxygen in tuberculosis is a large one, and so far only partially explored.—*The Medical Advance*, April, 1911.

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[No. 7.

A STUDY OF NATRUM MURIATICUM.

BY T. G. STONHAM, M.D. Lond., M.R.C.S. Eng.

(Continued from page 245.)

A good general view of the pathogenesis of natrum muriaticum may be had from two cases of chronic poisoning with salt, one in a girl and the other in a man, recorded in the "Cyclopædia of Drug Pathogenesis." The first case, that of a girl, aged 18½, presented the following symptoms: "She had a pale, suffering appearance, with sunken dull eyes surrounded by blue rings. On account of weakness she slips from one chair to another, but feels best when lying, which she does for several hours during the day. Her countenance betrays the highest degree of sadness, crossness, irritation of disposition, with tendency to anger and quarrelsomeness, she readily bursts out crying. Disinclination for work. She is vexed at having to answer questions. The circumference of her body has strikingly diminished; she has become thin. Heat of mouth, heartburn, sour taste, loss of appetite, constant loathing, nausea, with flow of saliva into the mouth. Feels as if a plug were sticking in her throat with contraction. Sour and slimy vomiting generally two hours after eating, followed by headache. Immediately after a meal feeling of fulness and pressure in stomach with contraction; shooting and cutting in bowels; burning in

abdomen from below upwards. Chill all over body after vomiting. Great chilliness of back. Tearing in back from above downwards, worse in the afternoon. Menses irregular and scanty. Hands full of warts." All these symptoms arose from a long continued eating of salt to excess. For two months she was treated with *nux vomica*, *ippecacuanha* and other drugs. In vain. She was then given the antidote to *natrum muriaticum*, viz., sweet spirits of nitre. She recovered in a short time, losing all her warts, recovering her former good spirits and cheerfulness, and becoming strong and blooming.

[9] The second case is that of a big, thin, dark complexioned man, aged 32, who was also a great salt eater. He complained of the following symptoms: "Loss of memory, so that he can with difficulty find the right word, forgetfulness, dazedness in the forehead, and loss of ideas. Want of sympathy, misanthropy, prefers to be alone, low spirits, sadness, fear of some serious illness, though he is indifferent to life. Pressure and heaviness in the occiput, worse after eating, weariness, heat in the head when eating, pressure and heaviness of eyelids, so that he can with difficulty keep them open. Itching ulcers in the nose. Aching in right lower maxilla, yellow spots in face. Burning in tip of white furred tongue. White watery saliva accumulates in the mouth when speaking; undefined toothache in the afternoon. Itching eruption on scrobiculus cordis. Pressure in stomach after food; many flatulent sufferings; stool pappy, followed by exhaustion. Constant irritation in genitals. Intermittent heart-beats with anxiety, in afternoon. Bruised feeling in sacrum, especially in morning, when standing or walking; lame feeling in sacrum; boring pressure in sacrum when sitting; prickling and formication on the skin of the sacrum. Tearing, in bones, at one time of arms, at another of leg; slight tearing drawing in hands and feet; prickling in tips of right fingers and in right big toe; falling asleep of hands and feet. Great exhaustion, especially in the morning. Itching all over the body in different places. Dislike to cold air; chilliness in the open air." This case was also completely cured by *sp. nitr.*

dule., two drops in a tablespoonful of water, to be taken during the day by teaspoonfuls. In four days the chief symptoms were gone.

To these two cases I will add one of my own which I have recorded in the *British Homœopathic Review*. [23] It occurred in a patient who was very fond of salt, and habitually took a great deal with her meat, soup and vegetables. She was fond of salt fish and salt butter, and had recently taken a great many onions baked with salt. She was aged 50, past the climacteric and had been ill for several weeks. "She complained of a constant feeling of coldness, especially down the back of the head and spine; it felt she said, as if jugs of cold water were being poured down her back, and no amount of clothing made any difference. She had a sallow appearance, and the skin was dry and shrivelled. She had become much thinner, and had but little appetite. There was much thirst, which was incessant all day; she said 'she felt she could drink gallons.' Obstinate constipation, pains in the legs and arms, weariness and tenderness; also pain in the small of the back was very troublesome, especially on walking about, it was relieved on lying down. Fluid coryza from the nose and eyes, and a dry tickling in the throat with paroxysm of cough. She was very depressed, shed tears freely, but disliked to be sympathized with. She wept most, while alone. There was an irritating papular rash, the principal seat of which was at the back of the neck, and mostly at the margin of the hair in the nape, but there was also some on the face, hands and fingers."

These three cases of chronic poisoning by salt could be multiplied indefinitely. It is astonishing how many cases one comes across if one is on the look-out for them. They will not all be quite so typical as these, but most of them will present a good many of the symptoms just narrated, and on inquiry it will be found that excess, though not always any great excess, of salt has been taken with the food. My case was ordered to take less salt, and was given two pilules of natrum muriaticum 30, night and morning, and in a few days

she was well. It is not necessary to tell these patients to leave off salt entirely, indeed, they will often get well under natrum muriaticum 30 without altering their habits of salt taking. The system is somehow given the power of disposing of the excess. But it is obviously best to cut down the salt to a moderate amount.

Having now considered the pathogenesis of natium muriaticum in its broad, general outlines, we will proceed to examine in more detail the action of salt on the separate systems of the body. And firstly, in the mental and moral sphere, disturbances in which were always held by Hahnemann to be of the first importance in the choice of the remedy. The mental and moral symptoms of natrum muriaticum can be summed up in one word—*depression*. This is a mental characteristic of most of the soda salts, but the depression of natrum muriaticum is quite distinctive. The mind is depressed, and tends to dwell on disagreeable and depressing subjects. Past injuries are called to mind, and a feeling of enmity against the authors of them is indulged in. But though there may be no particular unpleasant incidents to recall, and the patient's circumstances may be everything that could be desired, he is still profoundly depressed, and the depression is accompanied by an extreme tendency to shed tears. Nevertheless he cannot bear that anyone should console with him. If questioned as to the cause of his misery he resents it and gives short answers. He gets away somewhere by himself to indulge his miserable feelings and his weeping. He is easily startled, easily provoked to anger, is restless and distracted, and forebodes all manner of evils. The memory is weak, he is very forgetful, and is hung up in speech for want of the right words. All intellectual labour fatigues. Sometimes there is an alternation of immoderate gaiety, but depression predominates. In women these depressed mental symptoms are especially marked about the time of the menstrual period.

Dr. Talcott [24], who was Medical Superintendent of the Homœopathic Asylum for the Insane, Middleton, New York,

reported a case of melancholia cured by natrum muriaticum: "Mrs. P. was admitted to the Asylum April 3, 1879. She had been gradually failing in health and spirits for nearly a year. There was a history of intermittent fever quenched with quinine. When received she had the appearance of an old woman, although she was but 35; her features were pale, thin, drawn, sallow, and haggard. She was very restless, anæmic and feeble, with poor appetite, and had slept but little for several weeks. She complained of headache mostly in the occiput. She was incoherent in speech, constantly repeating short expressions such as "tell me the story," "give me the papers," "they know," and other disconnected remarks. Her breathing was laboured, inspiration lengthened, expiration very brief. She was much given to frequent and profuse ebullition of tears. Was thirsty and chilly at intervals. Patient had taken chloral hydrate for sleeplessness with indifferent results. Natrum muriaticum was at once prescribed and steadily continued. The first night she slept one and a half hours, and within five days sufficiently, and continued to do so till, in less than three months, she was discharged a fat, rosy, healthy, and happy young woman."

In the readiness to shed tears natrum muriaticum resembles pulsatilla, sepia, and ignatia. With sepia the patient bursts into tears while being questioned about her symptoms, but is not so resentful to consolation as natrum muriaticum, and instead of seeking solitude dreads it. Pulsatilla is mildly tearful all through, weeps before a word is said, and likes to be pitied. With ignatia the weeping is associated with a hysterical mood.

The headaches of natrum muriaticum are important. They are situated mainly in the forehead and temples, and may be semi-lateral. Speaking generally they are of a congestive type, the head feels full, constricted, and the brain seems to press down on to the eyes, making the eyelids heavy and difficult to keep open. The pain is throbbing or beating, as with little hammers, sometimes shooting; it is worse for movement and better for quiet and lying down. The headaches come, on

principally in the morning, often on waking, and tend to get better towards evening; they are relieved by sleep and relieved by perspiration of the scalp. Another natrum muriaticum headache is an occipital one, which may extend to the nape and shoulders. The frontal or temporal headaches are often periodical, and may be associated with vanishings of sight and with nausea and vomiting; these are apt to occur especially at the menstrual period, either before, during, or immediately afterwards. There may be vertigo, worse for movement, stooping, or turning in bed; a sensation on moving the head as if the brain wavered. The natrum muriaticum headache is very similar to that of bryonia, but it is more apt to be periodical than the bryonia headache, and to occur in a different type of persons, in one of irresolute temperament and in feeble health, instead of in the vigorous, full-blooded, energetic temperament, characteristic of bryonia. As an illustration of the cure of a chronic periodical headache by natrum muriaticum, I will relate the following case: "N. G., female, aged 19, has for a year or more suffered from periodical headaches, coming on at first every two or three months, but latterly first every month, and then more recently every fortnight. They are more apt to come on at the time of the period, usually towards the cessation of menstruation, and more commonly when the flow has been scantier than usual. The headaches last all day, she wakes with them, and they get worse till the afternoon or evening, when she sometimes vomits, but without relief to the headache, which does not depart till she has had a good night's sleep. The pain is in one or the other temple, and is throbbing or beating in character, not affected by bathing with hot water, worse from stooping, better from lying down quietly; there is loss of appetite during the headache. The catamenia last three to five days, are moderate or scanty, with some hypogastric pain of not severe character on the day before the flow commences. She is always very low spirited at the monthly periods, cannot refrain from tears, and has a good cry every evening. On October 21, 1909, she was given a dose of natrum muriaticum

200, which was followed by one similar dose on the next morning. On November 6 she reports: 'Up to the present, I have not had an attack of headache. I have felt much brighter. I sleep well, but awake unrefreshed and am very drowsy till about 11 a.m.' On November 27 she again reports: 'I am feeling much better lately. I have just got over my courses, five days ago. I did not have a headache before the time but on the second day it came on about 2 o'clock, just after lunch, and was situated right across my forehead. This lasted four hours, and went away just as quickly as it came. This was an unusual kind of headache, as I generally have it the first thing in the morning and it lasts all day. I did not feel at all depressed this time, I am glad to say. I am feeling a great deal better and brighter.' She was given another single dose of natrum muriaticum 200. On December 28 she writes: 'It is about thirteen days since my period. I have had a great deal of headache this time, but did not wake up with it except on the third day, when it lasted all day. I had headache for five days, which lasted on each occasion for about four hours and then disappeared. The period lasted longer this time, viz., eight days. I am not feeling so tired, and have enjoyed much better spirits lately. She was given one more single dose of natrum muriaticum 200. This sufficed, for she had no return of the headaches. I have seen her again quite recently, and she tells me she has been much better altogether, a statement which her appearance corroborates."

Sometimes hemiopia accompanies the headaches, usually at the commencement. It is perpendicular hemiopia, vision for objects to the right or left side being blurred or blotted out.

Another kind of headache for which natrum muriaticum is very useful, is that associated with eye-strain. It is a reflex headache caused by strain or spasm of the ciliary muscle, and occurs in cases of hyperopia, or of hyperopia and astigmatism. Dr. Lambert published several cases of this kind in the London Homœopathic Hospital Reports for 1899. The following is one of them: [25] "A. G., aged 34, admitted August 10, 1899,

complaining of constant headache of ten years' duration. She was wearing glasses ordered at this hospital six years ago, as follows: Right eye + 1.75 D., and + 2.25 D. cyl. axis 135°, and left eye + 5 D. sph., and + 5 D. cyl. axis 135°. Examination revealed the following: Right eye vision = $\frac{6}{18}$, with above glass = $\frac{6}{18}$. Left eye vision less than $\frac{6}{30}$ not improved by her glass. Retinoscopy showed refraction to be +4 4.5 in one meridian, and + 3 in the other meridian in each eye. Right eye vision with + 2.5 D. sph., and + 2.5 D. cyl. axis 35° = $\frac{6}{6}$. Left eye, vision with 4.5 D. sph., and + 5.5 D. cyl. axis 135°, gives best vision, but a poor result.

"On inquiry she described her headache as of a dull, heavy character in the frontal region, she had it constantly and awoke with it in the morning. She was ordered a change of glasses, and nat. mur. 30 ter die. On October 19 the result was as follows: Headache after persisting for ten years has quite disappeared. The pain was like a cloud over the brain, and there was intense depression. It disappeared after taking the medicine for two weeks, and was not due to the glasses, as she has not got her new ones yet.

Patients who are good subjects for treatment with natrum muriaticum often have their ailments made worse by a sojourn at the seaside, and this holds good for the natrum muriaticum headache. Dr. Burford has recorded a case in the [26] *Homœopathic World*, of October, 1889. "A young lady complaining of severe headache coming on only at the seaside, beginning in the morning and lasting till night, was given natrum muriaticum, 10 m. (F. C.). In two days the pain had quite vanished, although previously it was so severe as to confine her to bed. Though she prolonged her stay at the seaside for several weeks the headaches did not return: a fact, Dr. Burford remarks, showing, 'that the potency continued during the whole time to antidote the tendency of the crude drug.'"

There is reason to suppose that some attacks of migraine are caused by the sudden discharge into the blood-stream of chlorides retained in the tissues [27]. Dr. William Russell records in

the *Lancet* for December 3, 1910, an interesting case of migraine, in which the attacks were associated with a great rise in the hæmomanometer readings of the brachial artery, polyuria, and the discharge in the urine of a large quantity of chlorides, the attack being followed by a chloride excretion diminished below the normal. Natrum muriaticum in high dilution will often cure the tendency to migraine, and it is not unlikely that it does so by bringing back the chloride excretion by the kidney to a constant normal level, and so preventing the retention and subsequent sudden liberation of the chlorides which is associated with the attacks, and may possibly cause them.

Natrum muriaticum has a marked influence on the secretion of mucous membrane. The mucous secretion is either too watery, or the membranes are dry from absence of moisture. As in other tissues, so in the mucous membranes there is a disturbance in the normal amount of fluids in one or other direction. There seems no change in the quality of the mucus, but only in its fluidity. There is excess or deficiency of water, and it is hard to say whether excess or deficiency is the more characteristic. There may be excess of water in the secretions of one mucous membrane and deficiency in another; thus, watery diarrhoea may coincide with a dry mouth causing excessive thirst, or *vice versa*; constipation, resulting from dryness of the rectum may occur with a moist tongue and increased saliva. The symptoms will, of course, vary accordingly. Taking first the conjunctival mucous membrane; we have already noted the tendency to tears from increased secretion of the lachrymal gland, but there may also be an increased mucous secretion which may cause nocturnal agglutination of the lids, and is apt to be most marked in the external canthi, and associated with cracks and ulceration of those parts. But the more usual condition is of a feeling of great dryness of the lids, giving rise to symptoms of pricking, itching and burning in the lids, and a sensation as if a foreign body is in the eye; the margins appear red, and a condition of conjunctiva arises resembling granular conjunctivitis, for which natrum muriaticum is a useful remedy. The eyes feel very

dry and as if full of sand, and the discharge is watery and acrid.

In the nose we have the two conditions again; there is either violent fluid coryza, with loss of smell and taste and much sneezing, a condition which renders it very homœopathic to a common cold when it takes the form of a copious fluid coryza. In a recent epidemic I have cut short several fluent colds by means of nat. mur. 30; or the nose is sore with a sensation of great dryness and feeling of obstruction, and the discharge of thick mucus like clear white of egg. The soreness and discharge may be on one side only, the left.

A case of chronic nasal catarrh in a middle-aged gentleman lately came under my notice. It had supervened on influenza. The back of the nose felt dry and sore, and thick mucus hung about the posterior nares. There was also much mental depression and muscular lassitude. Nat. mur. 30, every fourth night soon rid him of his coryza, together with his depression and languor. In the mouth we get copious salivation with salt taste, and a clean, shiny moist tongue with bubbles of frothy saliva along the sides of the mouth, lips and tongue are dry and cracked, the tongue stiff with dryness, much thirst, a sensation of hair on the tongue, which may also have a mapped appearance, as if the tongue is covered with ringworms. (Silica also has the hair sensation on the tongue, and several medicines have the mapped tongue, such as ars., nit. ac., taraxacum.) The gums and teeth present a picture of scurvy with swollen, bleeding, ulcerated gums, very sensitive to cold or hot things; and the toothache is aggravated by cold air and by touch. Aching in the lower maxillæ.

In the throat there is hawking of salty-tasting mucus, a sensation as of a sore plug in the throat, dryness of the throat with a sense of constriction. Sometimes a sensation extending up the Eustachian tube as if the ears were plugged. The throat often has a glazed, dry appearance, and sore throat resulting from the application of lunar caustic are successfully treated with *natrum muriaticum*. The dryness of the throat often gives rise

to a sensation as if a splinter were in the throat, as is the case with arg.-nit., hepar., nit.-ac. and alumina. The symptoms referable to the alimentary tract are again those of disorder in the regulation of the amount of fluid in the secretions. There is intense thirst for large quantities of cold water, which agrees with the patient. Note the contrast with the arsenicum patient who also has thirst for cold water, but in small quantities and it disagrees; and with the phosphorus patient who has thirst for cold water which relieves at first, but the patient vomits it as soon as it becomes warm in the stomach. Food generally disagrees and causes fulness and nausea, and a sensation of contraction at the epigastrium. There is often an aversion to bread, and fat food, and a desire for bitter, sour, or salt things. He feels better on an empty stomach. Sweat may break out on the face during a meal, and after the meal the abdomen and stomach feel inflated, and the patient becomes somnolent. Acid and acrid rising.

In the intestines the most characteristic action is the production of a watery diarrhoea with borborygmi and pain about the region of the umbilicus; this is relieved by copious, watery, painless evacuations. Dr. Clarke [28] mentions an experience of his own. For a common cold he took eight globules of nat. mur. 200. "The next day," he says, "the cold was better but I felt ill, and presently a copious, gushing, watery, light-coloured diarrhoea set in, and persisted for some days, draining all my tissues, and reducing my weight by half a stone before I could think of the cause. Then the dose nat. mur. flashed on my mind, and I at once began to smell at a bottle of sweet nitre, the antidote. The diarrhoea and all other symptoms vanished in a way I have never forgotten." The Austrian provers constantly experienced this painless and copious watery diarrhoea, preceded in many cases by some pinching pain in the umbilical region. I recently had a case in an elderly gentleman of an acute attack of diarrhoea coming on so violently that it was impossible for him to dose off to sleep without an escape of fluid in gushes from the rectum into his pyjamas.

Copious stools, quite painless, succeeded each other at frequent intervals. After taking nat. mur. 30 he only had one stool and was rapidly quite well. But we perhaps more frequently think of nat. mur. for the opposite condition of constipation. Here the secretions from the colon are deficient and the rectum is unnaturally dry. There is a feeling of constriction in the anus, and the stools are hard, dry, and crumbling, like sheep's dung. There is frequent urging, which is unsuccessful or very scanty. The difficult evacuation is frequently painful, with a feeling that the anus is being torn and sometimes there is passage of blood. When the constipation is chronic there are often piles, which may itch, and excoriation in the intergluteal groove, which is painfully sore on walking. Constipation coming on at the seaside would indicate nat. mur. Dr. Clarke has related a case of nat. mur. constipation in one of the numbers of the *Homœopathic World*: [29] "A young married woman, aged 20, had been confined nine weeks before with her second child. Recovery was tedious. She had general weakness, a vaginal discharge, headache, and constipation. A fortnight after the confinement she was given an ounce of Epsom salts but without any effect. She had always been constipated and was usually relieved two or three times a week by artificial means. Once she went for four weeks without a motion. The stools were copious, but composed of small lumps, and she had much pain after the motion. Had piles. She was given nat. mur. 6 mi. three or four times a day. The following day the bowels were moved of themselves. She passed a large quantity of feces without pain, and this she did not remember having ever occurred before. She felt faint while the motions were passing. Her health was otherwise improved."

There is not a very marked action of nat. mur. on the respiratory mucous membrane. Accumulation of mucus in the larynx in the morning is a symptom produced by it, and the mucus may be blood-tinged; but more commonly the cough is a dry one, excited by a tickling in the throat or epigastrium, and causing a pain in the forehead at each cough, and perhaps,

also, an escape of urine from the bladder, in this latter respect resembling causticum. The tickling cough is worse in the evening on lying down on bed, and is relieved by sitting up, like pulsatilla. The cough is sometimes spasmodic with itching and vomiting and copious lachrymation; when this last symptom is present in whooping-cough nat. mur. would be indicated.

On the vaginal mucous membrane the two opposite effects are noticeable. There may be an abundant leucorrhœa of transparent, white, thick mucus, or unnatural dryness of the vagina with smarting and burning rendering coition painful. There is discharge of mucus from the urethra after the emission of urine causing itching and biting.

On the generative organs the chief symptoms in the male subject are the excessive irritability of the sexual instinct with physical weakness, an increase of smegma behind the glans, itching and crawling sensations in that part, and a gleet-like discharge of clear mucus. It has been found useful in gleet, especially that left behind after gonorrhœa suppressed by nitrate of silver injections.

In the female generative system perhaps the most characteristic symptom is a pleasure and bearing down towards the genital organs every morning on rising; she feels she must sit down to prevent prolapse. This seems to be due to a relaxed state of uterine ligaments and of the muscles forming the floor of the pelvis. It resembles sepia in this symptom, but comes on more immediately on first getting up. It is associated with a painful dragging in the lumbo-sacral region which is relieved by lying on the back. The catamenia may be premature, profuse, and watery, but are more commonly delayed and scanty, and are preceded, accompanied, and followed by the headache described earlier and by great sadness and low spirits. Abdominal cramps may be present. These delayed and scanty catamenia are usually one of the symptoms of anæmia, and when other nat. mur. symptoms are present there is no surer cure for it. During pregnancy morning sickness of frothy, watery phlegm and a

craving for salt are the principal indications calling for this drug.

In the urinary sphere I have already mentioned that excessive taking of salt may cause albuminuria. This is, however, a physical action due to excessive concentration of salt in the urine forming a hypertonic solution which is injurious to the renal epithelium of the convoluted tubes. I am not aware that it can cause albuminuria by its dynamic action, nor do I know of any cases of nephritis where it has been successfully used. The alterations it causes in the urinary excretion are probably secondary to changes produced in metabolism, and not to any action on the kidney itself. These alterations are either an extremely copious excretion with concomitant frequent emission, or a more scanty urine with brick-dust sediment. There is cutting in the urethra after micturition, and some weakness of the bladder sphincter, permitting of the escape of urine on coughing, and inability to hold the urine long.

The prolonged taking of excessive salt causes profound nutritive changes to take place in the system, and there arise not only the symptoms of salt retention as evidenced by dropsies and œdemas, but also an alteration in the blood causing a condition of anæmia and leucocytosis. There seems also to be a retention in the tissues of effete materials giving rise to symptoms loosely described as gouty or rheumatic gout. The provings are full of such symptoms. I will briefly indicate some of those which can be collected from the provings recorded in the "Cyclopædia of Drug Pathogenesis." Transient drawing pains in the inferior maxillæ, pulling pains in the ears, sticking in the side of the chest, drawing pains from nape to occiput, violent long-lasting stitch in the knee, stitches in the hepatic region, peculiar sensation in hip-joints, which, on turning, seem to come out of their sockets, crawling, drawing and fine stitching in the tip of the right index and thumb, cramp-like drawing in the right forearm towards the joint of the radius, drawing and tension under left great toe, cramp in calf, returning regularly at short intervals, painful tension in tendons on left

side of popliteal space, frequent fine stitches here and there in skin as if nettlerash were breaking out, stitch through pectoralis major in the direction of the shoulder-joint, stitching pains in all parts of the body, especially the fingers and toes, and numerous similar symptoms. The provings are full of them.

Dr. Burnett [30] records several cases of patients suffering from rheumatic and gouty disorders whom he cured with nat. mur. For instance, "A young gentleman of about 21 years of age came under treatment for synovitis of the right knee with considerable effusion. Patient had a dirty-looking skin, was constipated, and had many nat. mur., pains in the lower extremities. He was given nat. mur. 6, one dose in water every three hours. The medicine purged the patient so severely that it had eventually to be left off: it also produced a great discharge of urates, the urine becoming very thick therewith; no other medicine was given, and the patient was well in a fortnight." Also the following case; "Mrs. M., aged 50, had a most severe attack of rheumatic fever, the joints being much swollen, red, and distressingly painful. The usual homœopathic treatment was adopted, but with no great success. It was her fifth attack of rheumatic fever. Between the third and fourth week this was the condition: ill-coloured skin, obstinate constipation, foul tongue, urine very pale and limpid, great depression of spirits, fever, joints red, swollen, and painful, great restlessness, low and desponding of the future, sour perspirations, insomnia, bedsores, and great weakness. She was given nat. mur. 6 trit., as much as would lie on a shilling, every two hours in water. No other medicine was given and no auxiliaries used. Next day her urine became a little cloudy; the second day the bowels were moved, and then diarrhœa with loaded urine set in; the swelling, redness, and pain in the joints went away, the skin became cleaner-looking, the tongue cleaned gradually, the perspirations ceased, her spirits became brighter, and in ten days from beginning the medicine she was in full convalescence." Dr. Burnett mentions several other cases where nat. mur. was given for somewhat similar complaints and a critical evacuation

from the kidneys or bowels was produced with disappearance of the symptoms.

The anæmia is generally, though not always, associated with constipation, and also with cardiac and circulatory symptoms—anxious and violent palpitation at every movement, pulsations through the body, palpitation on lying down, especially if lying on the left side, fluttering of the heart, irregular and intermittent pulse, shooting or stitching pains over cardiac region, particularly at the apex, sensation of coldness over the præcordia.

Another indication of the way in which *natrum muriaticum* impairs nutrition is shown by the emaciation produced. The patient loses flesh notwithstanding a good appetite, in this respect resembling iodine, but whereas with iodine the patient feels better for eating, food makes the *nat. mur.* patient uncomfortable. The wasting of *nat. mur.* is especially marked about the neck.

Then there is marked weakness and relaxation of the muscular system, the patient is always tired and disinclined for any exertion; the muscles ache and feel sore, the tendons are stiff, ankles tread over from weakness of the peronei, there is asthenopia and sudden vanishing of sight on reading from weakness of the ciliary muscles of the eye; the internal recti are weak, favoring strabismus, the abdominal muscles feel weak and she likes something tight round the abdomen, she feels better with the corsets on and tightened up, the womb falls from relaxation of the muscular structures which should support it, the bladder retains urine imperfectly from weakness of the sphincter, the watery diarrhœa is very urgent from a similar condition of the anus, the back aches and feels to need support in the lumbar region and there is a desire to lie down with something hard pressed against the back and this relieves. Exertion generally makes the patient worse.

Then the nutrition of the skin is impaired. The subaceous glands secrete too much sebum, and a greasy, oily state of the skin ensues especially on hairy parts such as the head and face and the genitals, where the sweat glands are most numerous;

or they secrete too little and the hair becomes dry and falls out. Moist, or more often, dry eruptions appear, the seats of election being the margin of the hairy scalp on the forehead or nape, the bends of the joints, especially of the elbows and the hams, and the intergluteal and crural-labial or crural-scrotal grooves. The dry eruptions may take the form of iris circinatus. Fever blisters break out about the lips and chin, cracks occur about the orifices of nose, mouth and anus, as well as at the corners of the eyes, resembling nitric acid. The nails are dry and cracked, warts occur, especially on the palms of the hands. Nash [31] mentions that the upper lip may be thickened or swollen, in which symptom it resembles belladonna and calcarea. Urticaria, worse from exercise. The crystalline lens, like the skin, takes its origin from the epiblast, and Virchow in his pathology quotes an authority who gave chloride of sodium to dogs until he produced opacity of the crystalline lens. So we see that natrum muriaticum can produce cataract and is a remedy to be thought of for that complaint, and one would expect, from the general similarity of many of its symptoms to diabetes that diabetic cataract would be influenced by it.

Some of the most important symptoms of natrum muriaticum from the therapeutic point of view are the fever symptoms. It is a chilly remedy, the patient feels cold and shivering down the spine, different portions of the body feel cold, such as the praecordia, the stomach, the back, the hands and feet. He is not, however, any better for sitting over a fire, although sensitive to cold air. He likes to be wrapped up warmly, but this does not prevent the chilliness. He is chilly and thirsty at the same time.

Natrum muriaticum rivals cinchona and arsenicum as a remedy for intermittent fever. The indicating symptoms are given by Farrington [32] as follows: "Natrum muriaticum is to be considered when the chill comes characteristically between 10 and 11 a.m. The chill begins in the small of the back or in the feet. It is accompanied by thirst, and by aching pains all over the body. Sometimes urticaria complicates the case.

Fever is usually violent. Thirst increases with the heat. The headache becomes more and more throbbing. So severe is this cerebral congestion at times, that the patient becomes delirious. By and by sweat breaks out quite copiously and it relieves the headache and also the other symptoms." It has gained most repute in chronic agues, especially in those that have been suppressed but not cured by quinine, but is potent also in acute cases. Dr. Mitchell of the Chicago Homœopathic College says [33] "Instead of being a remedy of feeble power over intermittents, as is asserted by some in our school, it is one of the most powerful. I formerly regarded it as most useful in chronic cases, and after cinchona, but more extended experience with it convinces me that it is equally powerful in recent cases, and those that have not taken any quinine. Quotidians are most likely to be checked with it but it affects tertians favourably in some cases. Profuse perspiration is a good indication. Thirst during chill is usually characteristic of *natrum muriaticum*. Time of chill has not helped me in the selection. I have not been able to verify Boenninghausen's 11 a.m. indication; intermittents cured by *nat. mur.* have commenced both morning and evening." With regard to the time of the commencement of the fever I am bound to say that the provings in the "Cyclopædia of Drug Pathogenesis" would show that the afternoon or evening is the time at which the fever most commonly occurs. This, too, was the time of the fever in one of [34] my patients who was poisoned by taking, night and morning, some pilules of the 30 dilution. He had been given this as treatment for a chronic conjunctivitis, the result being that a diarrhoea with wasting and general enfeeblement set in and an afternoon fever during which he felt chilly but had a temperature as indicated by the thermometer of 101° to 103° F. On discontinuing the drug the fever ceased. I think, therefore we must consider that it is not necessary that the fever should set in from 10 to 11 in the morning, though that is given in most books as one of the chief indications. 10 to 11 a.m. occurrence of symptoms applies to other than the febrile ones,

as. an indication of nat. mur. Evening occurrence and aggravation are also characteristic. The relief of the symptoms on the outbreak of profuse perspiration is also characteristic of other states than fever. All nat. mur. symptoms are relieved by perspiration, and the perspirations are profuse. Perspirations alone are one of the nat. mur. indications, sweat on the face during eating, perspiration about the nose and mouth, of the head of the axilla, the genitals, and the feet.

[35] There are some symptoms characteristic of natrum muriaticum which are not easily classified, such as, "as if some displacement had taken place in the head" "as if cold wind blowing through the head," "pain like a rope round the head drawing tighter and tighter," "as if eyeballs too large," "of hair on the tongue," "as if hair were lying lightly on inner edge of left thumb towards wrist," "as if a foreign body sticking in cardiac orifice behind sternum," "when walking as if abdominal viscera loose, dragging," "as if rough, hard, foreign substance in rectum," "as if a string between uterus and sacrum in posterior fornix." Natrum muriaticum patients are made worse by sea-air, but "better by the seaside" may also indicate it; they are chilly but desire open air, and are worse from the heat of the fire and from the sun; worse in summer. The toothache is worse from warm food and also worse from cold drink, or drawing in cold air. He likes to be covered but it does not relieve. Is worse for bodily exertion, and also from mental exertion, talking, writing, or reading. Lying down relieves the vertigo, headache, backache, and aggravates the cough and palpitation. In backache he can stoop readily, but it pains to straighten up. Is worse after sleep, from 10 to 11 in the evening. Worse from coitus, from eating, from bread, acid food, fat, wine. Better going without regular meals. The full sensation is better from tight clothes. Back is better from lying on something hard. Rubbing relieves.

Natrum muriaticum is antidoted by smelling or taking sp. nitr. dulcis., by its own high potencies, by phosphorus, especially the abuse of salt in food. Arsenicum antidotes the bad effects of sea-bathing. Natrum muriaticum antidotes abuse of nitrate

of silver, abuse of quinine, bee stings. It has for its complements, apis, capsicum, and sepia. It is often useful for the train of symptoms set up by disappointment, fright, fits of passion, loss of fluids, masturbation, intermittents suppressed by quinine, lunar caustic, bread, fat, wine, acid food and salt.

This, gentlemen, concludes the information which I have collected for this paper, with regard to this wellknown and universally distributed substance, common salt; which the genius of Hahnemann and the observations of his disciples have raised from being merely an article of diet to the position of a deeply-acting and most valuable medicine, and so doing have given a proof of the truth of the law of similars, and of the power elicited by dynamization.—*The British Homœopathic Journal*, May, 1911.

EDITOR'S NOTES.

Duration of Pregnancy.

McDonald in the *Amer. Jour. of Med. Sciences* gives a method of calculation which is useful in these cases where the date of the last menstruation is not known. It is based upon the theory that the fundus uteri rises 3.5 cm above the symphysis each lunar month after the sixth, until at full term it lies just 35 cm above this point. The measurement is taken with the patient lying on her back, the tape being allowed to follow the contour of the uterus from the symphysis to the final dip of the fundus. The author lays down the rule that the duration of pregnancy in lunar months is equal to the height of the uterus in centimeters divided by 3.5 cm.—The *North American Journal of Homœopathy*, April, 1911.

Legal Control of Venereal Diseases.

The American Society of Sanitary and Moral Prophylaxis, at a meeting held in the New York Academy of Medicine, has urged that gonorrhœa and syphilis be made "reportable" diseases, as tuberculosis and the exanthemata are now, in order that sufferers might be isolated if necessary. It also advocated the wide circulation of educational literature in the form of pamphlets. Recently several of the popular and low-priced magazines have published most outspoken articles on this subject, and the names syphilis and gonorrhœa have seen the light for almost the first time outside of professional journals. Gonorrhœa in particular demands attention, now that gynæcologists realise that it is the cause of a great part of the pelvic diseases of women, if not of the sterility generally attributed to advancing civilisation.—The *Lancet*, April 8, 1911.

Apocynum in Heart Disease.

Our regular brethren have for a long time contributed scattering articles to medical literature in favor of apocynum. One of the most recent is contributed in the article by Dr. Wm. M. Gibson in the *New York State Journal of Medicine*. He praises the drug as follows: Of the treatment of dropsical effusions and general anasarca, much might be said if time permitted, but I want especially to call attention to the efficacy of one drug in the treatment of this distressing and often obstinate symptom, apocynum cannabinum. From no other remedy have I obtained such marked relief in the

various degrees of dropsy as from the use of a reliable preparation of this common herb. An infusion of the fresh roots gives us the full medicinal value of the drug, but the fluid extract may also be used when the roots cannot be obtained. If the fluid extract is employed, it is advisable to give it in capsules, filling each capsule at the time the dose is to be given, its exceedingly bitter taste can only be covered in this way. Its action is exerted on the heart muscle and is also markedly diuretic; it carries off large quantities of water through the bowels, and this, too, without any serious disturbance of digestion or the depressing and exhausting effects of powerful cathartics. While numerous references to its value in dropsy have been made of late, it is an old remedy and one well worthy of trial in the treatment of the frequent complication of cardiac insufficiency.—*The North American Journal of Homœopathy*, April, 1911.

Importance of Preserving the Gall Bladder.

J. W. Long in the *Lancet-Clinic* is reported to have stated that an analysis of eighty-six of his own cases convince him of the importance of preserving the gall bladder in all instances except in the presence of new growth, especially primary carcinoma, and in gangrene, where the whole thickness of the bladder wall is involved. Infection and empyema are only relative indication, and usually do well under cholecystectomy. The cystic duct obstruction, always present in empyema, is gradually overcome through the beneficent influence of drainage. Stone impacted in the cystic duct has always been successfully removed by the author. Even perforation was not an invariable indication, as the author had two cases that did perfectly well under drainage. No organ in the body responds so effectually to drainage as the gall bladder. Drainage is the sine qua non for curing the patient of the widespread sequelæ of gall-bladder infection. The relation between the gall-bladder and pancreas is very intimate, both anatomically and physiologically. The gall-bladder is not a storage pouch for bile, but is rather an expansion tank for the bile system. Its removal is always followed by dilatation of the ducts. Pure bile injected into Wirsung's duct caused pancreatitis, bile mixed with bladder mucosa did not, a cogent reason for preserving this function. The only avenue through which chronic pancreatitis may be treated is the bile duct system, and the best way is through the gall-bladder.—*The North American Journal of Homœopathy*, April, 1911.

A Reminiscence of an Irish Giant.

Persons living at the beginning of the nineteenth century were often able to relate interesting reminiscences of the giants who peopled the earth during their youth. English memories of the end of the eighteenth century, though often sensational, are none-the-less frequently worthy of credence. An amusing chapter of anecdotes concerns a giant, Patrick Cotter of Kinsale (1761-1806), who has often been confused with his better-known predecessor the "Irish giant," whose skeleton adorns the Museum of the Royal College of Surgeons of England. Cotter, indeed, exhibited himself under the name of the Irish giant, and was known as Charles O'Brien. A "Northampton Tonsor," writing in *The Mirror*, a popular magazine, in 1827, describes the visit of Cotter to Northampton towards the end of the eighteenth century. He was then in his seventeenth year, remarkably healthy-looking, of a mild disposition, and 8 ft. 7½ in. in height. "After the exhibition of the day, and when the dwarfs of Northampton had retired to their cribs, this proud giant of the earth would take his morning walk, measuring with amazing strides the distance between the George Inn and Queen's Cross." The barber trotted behind him at full speed, and the giant now and then paused to light his pipe at a lamp-post. He was a conversationalist and humorist, and his intelligence was above the average. He slept in two beds, placed end-to-end. After exhibiting himself for some years he retired from the show business and died at Clifton at the age of 46. He is buried at Bristol, and the rumour of his grave turns up periodically in the provincial press as though to dispute the authenticity of the skeleton of Charles O'Brien or Byrne, which John Hunter macerated and preserved in his famous museum. The period of the French Revolution produced also in France its tale of various monsters, but minds at that turbulent time were ready to believe anything.—*The Lancet*, April 29, 1911.

Wind Instruments and Longevity.

Without any definite grounds pathologists have ascribed to the blowing of wind instruments injurious effects on the heart and lungs. In the *Yale Medical Journal* for February, Dr. James F. Rogers states that he investigated the subject a few years ago and found that this teaching is not correct, and that there is no evidence that emphysema of the lungs is produced, or that there is any

increased proclivity to tuberculosis or other pulmonary affections among performers on wind instruments. He also could find no evidence of any bad effect on the heart. Since the publication of these facts, Dr. Forcheimer, in his "Prophylaxis and Treatment of Internal Diseases," has stated that "just as many players of stringed instruments have emphysema as players of wind instruments," and after a long experience of musicians he has come to the conclusion that "neither emphysema nor its predisposition is a result of their occupation." To determine statistically the effects on longevity of playing upon wind instruments, Dr. Rogers consulted Grove's "Dictionary of Music and Musicians" and Champlin's "Cyclopædia of Music and Musicians," and calculated the average age of 100 performers upon wind instruments and of a like number upon stringed instruments. The average length of life of players upon wind instruments was 63·5 years and of players upon stringed instruments 62 years. Of the former, 34 per cent. reached ages above 70 years. For the different wind instruments the average ages were as follows: flute, 61·2 years; oboe, 63 years; bassoon, 63 years; horn, 64·4 years; clarinet, 65·2 years; trumpet and cornet, 69·1 years. It is interesting that the players on wind instruments who exert the greatest intrapneumonic pressure—namely, performers on the trumpet and cornet—were the longest lived, while the players who exert the least pressure, the flautists, were the shortest. Dr. Rogers does not attribute the greater longevity of the former to the higher pressure, but to the facts that the more vigorous would be apt to take an instrument requiring much effort, and that only such as could make a mark as virtuosi would secure a paragraph in an encyclopædia. A consumptive, like Sidney Lanier, might be a brilliant flautist, but no consumptive could make a fine clarinetist or trumpeter. These figures therefore refute the current teaching that playing upon wind instruments tends to shorten longevity. It appears to have been assumed that the high intrapneumonic pressure during blowing, which may exceed 100 mm. of mercury, would tend to cause emphysema. But the fact is overlooked that this pressure is counterbalanced by the pressure of the chest walls on the lungs.—The *Lancet*, April, 29, 1911.

Have Mosquitoes or Flies any Share in the Spread of Leprosy ?

For some years the medical staff of the United States Public Health and Marine Hospital Service have been investigating, in the Hawaiian Islands and in other places where opportunities offered, the various problems associated with the occurrence of leprosy. Our readers may remember that in *The Lancet* of Feb. 27th 1909, we drew attention to a report on, "The present status of the Leprosy Problem in Hawaii," by Dr. Walter R. Brinckerhoff, at that time director of the leprosy investigation station in the colony. In that report he discussed with much ability the possibility of the mosquito acting as an agent in the diffusion of the disease, but came to the conclusion that on the whole the probabilities were against such a mode of the spread of leprosy. Since then the question has been receiving further attention at the hands of Passed Assistant Surgeon Donald H. Currie, who is now the director of the Hawaiian Investigation Station. In a series of "Studies upon Leprosy," published recently at Washington, Dr. Currie and his colleague, Acting-Surgeon Harry T. Hollman, contribute a number of articles dealing with leprosy from various standpoints. The most interesting of these are Dr. Currie's experimental studies on the influence of mosquitoes and house-flies in disseminating the disease. On theoretical grounds it appeared possible that mosquitoes drawing blood from a leprosy nodule might convey the bacilli to the skin of a healthy person subsequently bitten by the insect. Leprosy ulcers are situated often on exposed surfaces, especially on the face, and are therefore easily accessible to the mosquito in search of blood. Moreover, the rubbing and scratching of the site of a puncture on the healthy skin by the person bitten might be thought of as likely to expedite the inoculation. The mechanism for the transference of *B. lepræ* from the leper to the healthy individual, therefore, appears to exist. To determine whether the blood, which the mosquito has imbibed from a leper, contains the bacilli, and whether such bacilli, if imbibed, remain in the mosquito for a reasonable length of time, Dr. Currie devised a series of experiments. His conclusions now published are unfavourable to the view that the mosquito is concerned in the spread of leprosy. He demonstrates that these insects in feeding do not imbibe *B. lepræ* for the reason that the mosquito inserts its proboscis directly into a blood-vessel, thus obtaining blood free from bacilli and unmixed with lymph. The insect neither avoids

biting a leprous nodule nor is its digestive tract or the contained fluids capable of altering the morphology of this bacillus in a reasonable length of time. The mosquito, therefore, is not, Dr. Currie says, of epidemiological importance as regards leprosy. With respect to the influence of domestic and other flies found in and around houses in Hawaii, Dr. Currie's investigations show that when given an opportunity of feeding on leprous fluids these insects will afterwards be found for several days to contain *B. lepræ* in their intestinal tract and in the fæces which they drop on food and other articles. This fact, together with the well-known habits of the house fly, makes it certain that if there is opportunity afforded to feed on an exposed leprous ulcer these insects will frequently convey immense numbers of *B. lepræ*, directly or indirectly, to the skin, nasal mucous membrane, and digestive tract of healthy persons. But our present-knowledge does not permit us to decide whether such fly-borne bacilli are or are not capable of infecting persons whose skins or mucous membranes are thus contaminated. Meanwhile, until this definite knowledge is forthcoming, we are justified in regarding these flies with grave suspicion as being in all probability one of the means by which leprosy is disseminated.—The *Lancet*, April 29, 1911.

The Influence of Old Age upon the Type of Illness.

In a paper read before the Vienna Medical Society Professor H. Schlesinger discussed the changes produced by old age influencing the course and type of diseases. He said that in elderly persons many diseases presented symptoms differing materially from those which were met with in young people. The reason was mostly the arterio-sclerotic changes so frequent at the present day, with the concomitant affections of the heart and the exhaustion, so to say, of the vaso-motor centres of the medulla oblongata; the protective and preventive apparatus of the organism was also somewhat altered. There were very often differences between the axillary and the rectal temperature of old people. The so-called asthenic type of senile disease was often accompanied by pyrexia, but this could be found only by rectal thermometry. The difference might be as much as from 1° to 3° C., which, however, did not permit any prognostic conclusions, as in younger patients. The examination of the senile thorax gave results quite different from those obtained in adolescence because the vibrations of the ossified or calcified

thorax were of a distinct type. The lungs tended to become atrophic and the respiration was more superficial, thus producing special physical condition, with changes of the percussion note and the sensation of resistance. In senile tuberculosis extensive anatomical lesions might give rise to comparatively mild clinical symptoms, only some râles and a slight manifestation of consolidation being often present in cases of serious disease. Hæmoptysis was not more frequent than in young patients. The pneumonia of old age was often of an ambulatory type. Apoplectic attacks might occur in which there was no other anatomical change than œdema of the brain; meningeal irritation might last for weeks. Disease of the alimentary canal was often disguised under the form of chronic gastro-enteritis. The ordinary prognostic and diagnostic aids were therefore not to be depended on in the treatment of elderly patients and must be supplemented by the consideration of the special features of each case.—*The Lancet*, April 8, 1911.

The Cigarette.

More than eight and one-half billions of cigarettes were sold during 1910 in the United States; nearly one hundred cigarettes are produced and distributed every year for every man, woman and child among our ninety millions of people; nor are here included those "cotton-nails" that are rolled by the smokers themselves or the imported brands. Imports of cigarettes are large; but comparatively little in proportion to the output of American factories. The *United States Tobacco Journal* considers that the enormous increase last year over the number of cigarettes smoked in 1909 (1,856,487,308) was in spite of an increase in the revenue stamp tax of 71 cents, and a widespread movement against cigarette smoking throughout the country. Denunciation seems to have increased the popularity of the cigarette. We do not in this place submit moral arguments against its use; nor do we here consider the cigar and the pipe; nor do we address the adult smoker, recognising full well that the man who has attained his majority must work out his own destiny, and that after twenty-one, tobacco (when used as cigars or in the pipe) is distinctly beneficial to many men. Our observations here are purely medical and have to do with the smoking of cigarettes by the lad, the adolescent and the youth.

Some years ago the late Dr. I.N. Love declared: "The numerous mental wrecks, youths who have come under my care during the last

ten years, whose lives were failures or who fill suicides' graves, impress me that to-day tobacco stands as the gravest danger confronting the new century, and the medical profession has a fearful responsibility in educating young men and their parents to appreciate this danger." Such observations and others of a like tenor have been widely concurred in; there is now no little literature on the subject, some of which is a trifle hysterical; and antitobacco leagues and legislatures have taken action (sometimes ill-advised) in these premises. Nevertheless, in view of the statistics above given the general trend of sentiment against the use of tobacco by the immature must seem sound in essence.

Tobacco is one of the "paratriptics," one of the savings-banks of the tissues; and there are many occasions of stress and strain when the adult needs its comforting and sustaining properties. Not so the youth, however, who has superabundant vitality, and needs no stimulant or restorative. Moreover the cigarette smoke is inhaled deep into the lungs, invading the most delicate tissues, whilst cigar or pipe smoke seldom gets by the epiglottis.

Among the baneful effects of nicotine (or the pyridine compounds into which it is converted) are those of the nervous system as evidenced by tremor, vertigo, giddiness, leg weariness, pains in various nerve-centers, amnesia, aphasia, psychic aberration and other symptoms referable to spinal or cerebral irritation; and especially such vaso-motor paralyses as cold extremities, pallor, clammy hands and excessive sweating. Brunton (who made a most scientific investigation) found that at first nicotine powerfully increases the blood pressure and slows the heart; the arterioles are contracted, partly by reason of stimulation of the medullary vaso-motor centres, partly because of the local action upon the arterioles themselves. This slowing is presently followed by the rapid pulse of heart-ganglion paralysis. The symptoms thus refection; and especially such vaso-motor paralyses as cold, regular and rapid pulse, precordial pain oftentimes severe and terrifying and very like angina pectoris. The myocardium may become impaired by constant contraction of the coronaries; this and the rise of blood pressure may lead to arteriosclerosis; a true angina may develop, as also a fatty heart.

Digestion is often impaired, much saliva may subconsciously be swallowed by smokers who do not spit; especially in the neophyte does this occasion nausea, vomiting, flatulence and gastralgia. No doubt also the normal gastric secretions are thus diminished, hyperchlorhydria induced and the muscular tone in the digestive

tract impaired. Tobacco may affect the nose and throat either by direct irritation or indirectly from dyspepsia or other constitutional disturbances.

Smoking produces, by local irritation, a catarrhal conjunctivitis, or the nicotine, when slowly and continually absorbed from the alimentary tract, may induce acute or chronic amblyopia. Impotence has been ascribed to tobacco. Those who work in tobacco are apt to suffer asthma, anemia, respiratory diseases and digestive disturbances. As we are here concerned mainly with the immature, it seems relevant to consider the experiments of Vas upon puppies. By means of tobacco he induced anemia; the hemoglobin and the red blood corpuscles decreased over one-half; the solid residue and the alkalinity of the blood decreased a little, whilst the leucocytes were decidedly augmented.

By this presentation, and much else, we conclude that a substance which can, when persisted in, so profoundly affect the youthful organism, is likely to work destructive and permanent changes in his tissues and in his *morals*. And as to woman smokers of cigarettes!—?—The *Medical Times*, April, 1911.

Compulsory Vaccination.

Dr. R. F. Rabe, M.D., New York, Formerly Health Officer of Weehawken, N. J. writes thus on Compulsory Vaccination:—

Compulsory vaccination is contrary to the fundamental principles of individuals' liberty. Vaccination by scarifications may and does protect from small-pox, so far as we are able to judge. It is beyond the power of any one to prove that immunity to any disease, after the use of any prophylactic, is due to the latter. At the same time it is fair to state that the history of vaccination shows beyond any reasonable doubt that wherever it has been systematically and extensively employed the prevalence of small-pox had been greatly diminished. Vaccination by scarification is contrary to the basic principles of surgical cleanliness, in that it requires the surgeon to directly inculcate into a healthy body a morbid product of an animal disease (cow pox) of the origin of which he is never certain and the nature of which is frequently a grave doubt. Vaccine is frequently contaminated with the germs of various fatal diseases, such as tetanus, for example. Even the best of so-called glycerinated lymphs have, upon bacteriological examination, been found to be so contaminated.

In vaccination by scarification, accidental contamination of the sére is of frequent occurrence and often fatal in its results, or productive of life-long invalidism, as any physician of experience knows. Such a result, while no doubt due to the carelessness or ignorance of the person vaccinated, is nevertheless directly chargeable to such vaccination and though occurring but once in a thousand cases, is an eloquent appeal for the abolition of so unhygienic a rite.

Honest health officers admit and lament such unhappy results and would welcome any substitute measure which might insure reasonable protection from small-pox.

There is such a substitute measure, efficiently employed, safely applied and legally qualified. The State of Iowa recognized prophylaxis against small-pox, produced by the internal method of variolization. The method consists in the administration by the mouth of a sufficiently attenuated preparation of the virus of small-pox, so that no poisonous effects are in the least degree possible, but that a certain reaction manifested by definite symptoms, may take place, thus rendering the subject, in accordance with well-understood laws, absolutely immune to the contagion of small-pox. This method has long since passed the experimental stage, is certain in its results provided that it be applied sufficiently early, a provision which is equally true of vaccination by scarification, and is furthermore without the slightest danger to life or health. The writer has himself, while health officer, had personal experience with the internal method, not only with small-pox patients and with those exposed to the disease, but in his own case, in which constant exposure to the disease for a period of seven weeks failed to produce even the slightest symptom. He regards the efficacy of the internal method as proved beyond any and all doubt, and as a step forward in the progress of preventive medicine.

There can be no objection raised to those who may prefer vaccination according to the method of scarification. The responsibility rests with themselves and they must bear any untoward results, but it is manifestly unjust as well as un-American to force upon helpless infants and children or upon unwilling adults an antiquated, unclean and dangerous operation, when a modern, hygienic and safe method obtains.—*The Homœopathic Recorder*, May 15, 1911.

Infection in Human and Bovine Tuberculosis.

The Medical Record summarizes the views of Sir John McFadyean, of the Royal Veterinary College, London, on this subject. McFadyean points out that the weight of evidence in favor of the origin of tuberculosis is unquestionably in favor of the old inhalation theory, but that it cannot be categorically denied that infection may enter the body by ingestion and may then cause lesions in other parts of the body outside the alimentary tract. The conclusions that McFadyean arrives at are: It takes only very small doses of tubercle bacilli to produce an infection in susceptible animals, where these germs are inhaled. It is only possible to infect susceptible animals by way of the alimentary tract, by using very large doses of tubercle bacilli and even then it is difficult. When such infection is produced, the primary lesions are intra-abdominal, and if the interthoracic lesions exist, they are secondary. Therefore, naturally contracted cases of tuberculosis in man and other mammals can be ascribed to ingestion only when the lesion revealed at the post-mortem is confined to the abdominal lesion or where the abdominal lesion is recognizably older than lesions existing elsewhere in the body; and so it is highly probable that the commonest natural method of infection of the lungs in man and cattle is by inhalation.—*The North American Journal of Homœopathy*, May, 1911.

Draughts and Colds.

Macfie in the *British Medical Journal* believes that while draughts do occasionally play an auxiliary part in the production of colds, yet the endeavor to escape colds by avoiding draughts is a futile and foolish policy. It is well known that the skin reflexes play an important part in the respiratory and circulatory functions. When it is wished to excite the respiratory center of a new born babe, the skin reflexes are appealed to, and in cases of night sweats a breeze on the skin gives a tone to the whole vasomotor system. The skin is meant to be exposed to changes of temperature, it is meant to have a blood supply that responds to thermal changes; hence anything that interferes with the skin reflexes and so promotes vasomotor incompetence will lead to deficient vigor and resistance. The bracing effect of mountain and seaside breezes are largely due to their stimulating effects on the secretory and excretory functions of the skin, and the man who endeavors to avoid colds by avoiding all draughts, and to enclose himself in a motionless layer of moist air, will not only catch more than his share of colds, but will possess

- less than his share of strength and vigor.—The *North American Journal of Homeopathy*, May, 1911.

A Fourth State of Matter.

Prof. Briggs, of Leeds University, recently discussed before the Royal Institution the question whether ultra violet light is corpuscular in its nature, or whether its nature is that of ethereal pulsations, as is usually supposed. One of the professor's conclusions is that there may be a fourth state of matter in which the corpuscles or electrons play the same part as do the molecules in the kinetic theory of the gaseous state. In the latter theory it is assumed that the particles by their dartings to and fro with great velocity collide and thus produce all the phenomena of pressure, expansion and so forth in gases. There are four different forms of radiation that can be passed at will through the atoms of matter ; and a study of the particles after they have emerged again from the atoms will show what has happened to them in the atom, and hence something of the constitution of the atom itself. These four forms of radiation are known as the alpha, beta and gamma rays of radium and the X-rays. The first are atoms of helium, the second electrons, whilst the third and fourth have hitherto been considered pulsations in the ether analogous to light waves. When a particle encounters an atom it passes through it and on to another ; it loses a little energy at each collision and finally (when it has lost all) passes out of recognition. When an alpha particle passes through a gas it moves straight through every atom it meets ; it suffers scarcely any deviation from its course until its velocity is nearly spent. Most of the atoms it passes through are ionised (rendered conductors of electricity). The gamma ray moves along in a straight line and penetrates atoms with far greater ease than either of the other radium rays ; sooner or later it "disappears inside an atom, branding on a large share of its energy to a beta particle which takes its place. Prof. Briggs concludes that the gamma rays and the X-rays are corpuscular and not ethereal pulsations ; they may be electrons, corpuscles of negative electricity" which have assumed a cloak of darkness in the form of sufficient positive electricity to neutralise them. "And since it appears that ultraviolet light possesses many of the properties of these rays, this light may likewise be corpuscular in its nature. And if this ultraviolet light be such, why then may not all light be corpuscular?—The *Medical Times*, May, 1911.

Gleanings from Contemporary Literature.

SOME RECENT BIOLOGICAL KNOWLEDGE AND ITS RELATION TO MEDICINE.

BY DR. G. F. GOLDSBROUGH.

Ladies and Gentlemen,—

When asked by the Committee of the British Homœopathic Association if I would give one of the popular Scientific Lectures, which form so important a part of the work of the Association, after a little consideration I consented, because I thought I should thus have an opportunity of placing before the members of the Association some of the more general scientific reasons which support or are contributory to the great truth of medicine which it is the purpose of the Association to promote or aid in its development.

As will be noticed later, the general facts I wish to present, are such that anyone with slight knowledge of biology would at once be able to apprehend their relationship and importance. Mostly on this account the significance and bearing of these facts on the practice of medicine is usually assumed in the ordinary discussions of medical theory, with quite a seldom reference to the extreme interest which such facts lend to our knowledge of disease and our efforts to combat it.

But before I introduce you to the facts, I must endeavour, if I can, to define my biological point of view in a manner which may be apprehended by every one present, whether possessing any knowledge of the subject or not. And I must do this with my end in view.

You all know something by experience about sickness and health, living and not living, individuality and the community, and you all know also that as a member of the community, the medical man, in both his knowledge and practice, is concerned with the special facts of health and life and personality. But now if I were to ask anyone in the room to define for me a single one of these terms, I can venture the assertion 'without fear of contradiction that the definitions returned in response to my request would vary sufficiently to be anything but unanimous, and that they would very likely be extremely confusing. On the other hand, you not infrequently hear the boast that medicine is grounded on the bed rock of fact, either physical or biological, and is therefore both scientific and philosophical. Accordingly there should exist no lack of agreement on the definition of the leading or principal facts of this groundwork.

Now undoubtedly everyone will agree, whether he be what is called the plain man or layman, as distinguished from the professional man, or whether he be scientist or philosopher, that the facts of life, the medical man is concerned with, are what are termed its phenomena or appearances, as distinguished from any previous theory or conception or

interpretation of what life is, and that these appearances as living are distinguished from other appearances as non-living. No doubt will be possible to your minds as to the structural difference between Mahomet and a mountain, between a mouse and a delicate morsel of cheese and the trap, or between a tree and a stone. Some doubt might arise in a child's mind, perhaps, that there was any difference between a crystal, a horn, or a piece of coal, except that they were of different shape and colour. But the average school boy would know that the crystal was inorganic matter, that the horn had belonged to a living animal, and that in a botanical sense the piece of coal had also once been alive. I cite these extreme instances however, because, although everyone agrees that the phenomena or appearances of life as distinguished from the non-living, are the subject matter of the biologist and physician, I must almost in the same breath contradict this statement and say that it is not the phenomena as merely appearing that are this subject matter, but phenomena as reappearing or recurring phenomena which can be *identified as living* as distinguished from other phenomena also recurring which can be *identified as non-living*. So that you see that it is not the mere appearances of living beings which are important, but on certain appearances recurring, it is what they are on recurrence, compared with others, which gives the medical man his concern with them.

Now as the majority of intelligent people know for centuries, great controversy has gathered round the interpretation of the term *living* compared with *non-living*. In other words this controversy has gathered round the whole meaning involved in what that *identity is*, in reappearances and recurrences we term living, compared with the identity in appearance we call non-living. Certainly from the point of view of the living, it is a fact that identity does not exist as a common fact between these appearances. There is a real difference between the non-living and the living. Many conflicting and opposing theories have been brought forward to combat the truth of this statement. A few years ago it was taught in the medical schools that it was the duty of the biologist and physiologist to endeavour to interpret the biological facts (that is the facts of the living) in the terms of physical fact (that is in the terms of the non-living); but so far, the appearances of life have always refused, as it were, to be included in the *fullest* interpretation which could be applied to the non-living, and thus a knowledge of the living has been obliged to assume something different in appearance, different in sequence from merely physical appearances, and although the appearances of life have partially lent themselves to a physical interpretation, they have never wholly done so.

In the face of these facts, for the past five to ten years there has been a reaction in the medical scientific world in favour of some special theory of life compared with physical and chemical theory generally. In the schools such theory goes by the name of vitalism.

Now I want to point out here, and I hope to show later, that the

name vitalism does not help in the interpretation of what is meant by it, except to indicate that there is something in life not included in ordinary physical and chemical laws or constructions.

In common with other scientists of his day, the founder of our system of treatment describes this something as vital force, but the term force is misleading, as vitality is not force distinguished from force in general. Nor is the term spirit any better, because if we try to define spirit we land ourselves in a logical tautology.

Spirit as so defined simply means "unseen force," which phrase of course again is meaningless as describing anything distinctive. But for to-night we must not trouble ourselves with definitions at the outset, but in a very slight manner try to look at the subject from another point of view.

It is the differences in appearance, differences in recurrence and differences in the sequence of forms, previously identified as living, which have given to biology its place in the hierarchy of sciences in the widest acceptance of the term, and also in all sciences derived therefrom; for example, embryology (or the science of individual development), morphology, (or the science of living forms), physiology (or the science of living function) in relation with environment, and in one of its aspects, psychology (or the science of mind). Of course it is that which is distinctive in biological science, but always related to the physical, as its environment, which gives to medicine her place among the sciences, although as a branch of practice it is well to regard medicine as an art, rather than a science, but an art based on the facts of biological and physical science.

But if we are to understand the true relationship of medical art to the scientific facts on which it is based, and yet discarding definitions at the outset, we must be extremely careful of the way or relationship in which we think of them. Let me propose a simple case to illustrate my meaning. I met a friend the other day, and greeted him as in the picture of health. The next time I heard of him he was sick, and needed the care of a medical man. My friend, to me, was the same friend on the second occasion as he had been on the first, but something had happened to him in the interval, perhaps unknown and unperceived even to himself or to any persons round about him. But some change had taken place in his life, some change had probably occurred in his appearance which would enable me to say he was not quite the same friend as he was before. Now to his medical man the appearances of health of my friend were biological facts of the previous knowledge of the medical man as knowledge of life in the widest sense; the appearances of his sickness were also biological facts (now called pathological facts), as illustrated by the symptoms of his disease. The appearances of life on the second occasion were in some respects the same as they had been on the previous occasion. That is, it was the same friend who was ill, whom I had greeted as well on the previous occasion.

In other respects the appearances were different. But what had happened? And how, in the presence of this identity and difference, could what had happened be considered or thought about?

I must guard myself against going too far into the intricacies of such a question, for such would take up too much time and be unsuitable to my present audience. But this much we may say, that not merely physical change or appearance had happened to the man. There had been vital or biological change as well; and the medical man who was called in would be obliged to form some opinion on the nature of the processes or changes termed vital, which had taken place between the one occasion in which the friend was seen as a healthy man, and the other.

Now it is the *kind of change or movement* which may take place in vital appearances in an *interval of time* by comparison with change or movement termed purely physical, which might take place in the same interval, which gives warrant to the term vital or biological as applying to certain phenomena or appearances otherwise distinguished by their form and colour, and which kind of change or movement is not observable as a quality attaching to purely physical appearances, such for example as the heavenly bodies, a mountain, a mass of water and mechanical objects manufactured by man.

On the other hand, however, changes termed vital possess a physical character; considered separately they are simple changes or movements, and they are observed by comparison with other simple changes or movements, like in kind, which are not termed vital.

You will thus see we must guard and qualify our use of terms even yet, and for the purpose I have in view to-night I must draw attention to three features distinguishing vital movements which no merely physical interpretation, an interpretation that is to say in terms of simple force and movement and velocity, such as electricity or chemical affinity, are sufficient to overtake and describe.

But let me here repeat that we should have no knowledge that there was such distinctive vital movement except and unless certain appearances *had been observed and identified, and that similar appearances had recurred*. Our attempted interpretation of appearances we see now is, and will be, based on previous knowledge. Knowledge on the one hand, that there is something different from the purely physical in the mental process of identification, and knowledge that there is something different from the merely physical in the fact of recurrence of appearances which can be identified. But any interpretation we may give them will apply to appearances as seen now, as if there had been an interval of time between the appearances observable now, and the previous appearances of a relatively identical kind, which in fact we know there has been.

This element of time is of the greatest importance in all judgment in relation to vital forms. We judge of purely physical appearances by the force displayed in a given distance. We judge by inference from previous knowledge of other physical effects, such for example, as heat,

light and electrical discharge, by what they can accomplish in a second of time. But in the case of vital appearances, they cannot be judged of without including the fact of time itself as something real and important to the distinctive movement of the organism. Hence our judgment of vital appearances must be from appearance to appearance unmeasured by time, but involving the reality of time in any judgment we may form in reference to these appearances. Vital changes must take place in time, but time as measured by our usual spatial method has no equivalent within which the processes of vitality can be embraced by the mind. This may seem puzzling, but life is a puzzle, and in our attempt to understand it, we must not be afraid of the difficulty.

But now granting that our inference of identity in two or more separate occurrences of appearance designated as of like kind, and a knowledge of which we have reached through lapse of time, the features which distinguish the movements of those appearances we term vital are these.

1. In reference to any appearances being observed now, in relation with previous knowledge, the form and colour of the organism as it is termed, appears to have maintained itself through its changes with the environment, and it may be certainly affirmed that this self-maintenance is always to an end, namely reproduction or the perpetuation of the species, or kind of plant or animal.

2. In reference to life or living forms as a whole on the earth, repetition of form, which is absolutely alike in possessing the power of relative self-maintenance as an end to reproduction varies, both definitely and indefinitely in details of appearance. No two individuals appear as quite alike for example, and this is the issue of reproduction as a distinctively vital movement. Notice that the identity previously spoken of is implied in the term repetition, as it also is in reappearance and recurrence, which are all implied in all forms judged as identical.

3. Both self maintenance and reproduction appear to be relatively facilitated and hindered by *aggregation* of forms as regards their distribution in space. The power to live under given conditions being termed survival or living up to, over and upon conditions, survival being a distinctive feature of life.

Unfortunately I have no time to illustrate these great principles of biological science. I must assume that you are quite well aware of their universal character, and of the almost infinite variety of forms which have issued from their operation in the course of evolution.

But, asking you to bear these principles in mind, there are two things I wish to draw special attention to, and which are the *raison d'être* of my addressing you on the subject at all. (a) One is the meaning we are to attach to the term *individuality*; (b) and the other is the importance of change or variation not in the organism, but in the

environment, as a means towards facilitating the distinctive movement of life.

Any vital form which can relatively maintain itself with a view to the end of reproduction is to be termed an individual: It is not necessary that a particular form should take an actual individual part in the process of reproduction, to be accounted an individual. For instance, the workers and many of the drones in a hive of bees are as much individuals as her majesty the queen bee herself is. The former feed themselves and work, and at length they die, while on some of the drones and on the queen bee has devolved the responsibility of perpetuating the species. The mark of individuality is self-maintenance through change by comparison with merely physical change in the environment, and we cannot insist too strongly on this broad acceptance of the term individual.

The simplest vital individual or unit is of course the single cell, and there are, as you know, on the principle of self-maintenance towards the end of reproduction, myriads of single cells which are individuals. All single cells tend to form aggregates however, but as individuals they go through their life towards the end of reproduction by means of variation and change or movement which they meet with in the environment. A single cell which cannot maintain itself independently of other cells cannot be termed an individual, and although in connection with some of the lower forms of life it may be difficult to state whether individuality exists or not, no doubt is possible to the statement that in the case of millions of aggregates, individuality is attained and maintained only through community of cell life, through organization, and through differentiation of function combined in singleness of form.

In the latter case, of which, at the end of a long course of evolution, the human body is the most conspicuous example, single cells cannot live and maintain themselves apart from the aggregate. The important cells of the human body live only as they are connected by other cells forming connective tissue and including organic material such as the calcareous substance of the bones, and the iron of the blood, uniting the body as a whole, which in its totality possesses the power or ability to maintain itself and further the end of reproduction and perpetuation of the species.

[As illustrations of these principles by means of diagrams the lecturer referred here to the skin and the brain, as aggregates of cells, having undergone extremes of differentiation in the most fully developed organization, and he continued as follows.]

Now in the further pursuit of my thesis you will be prepared for the statement that, to the medical man, the human body as an individual, is no different in essential structure from the bodies of the lower forms of life. It certainly differs in complexity. It is of higher complexity, especially in brain development than any other form.

It differs also in the range of differentiation of the varied aggregates

of its cells, though in range of differentiation it scarcely differs from forms most nearly related in the scale of evolution, for example, (the class of vertebrate animals generally. But in the nature of life, as individuality, in the sense we have defined it, namely, that of self-maintenance, through change to the end of reproduction, the human being shares with all other forms the same essential features of cell structure, of organization and of function in harmonious working to the end in question.

Now, to bring out clearly to the mind the scientific character of these great principles of individuality and the advantage of differentiation in the environment which facilitates the end of life, principles which the medical man, who is acquainted with homœopathy, bases his practice upon, I must draw attention to some features in the development of the individual, as observed in the very earliest stages of cell structure, proliferation or multiplication.

I should say that the methods of investigation by which the results I shall refer to have been attained are, chiefly, observation of germ cells through the highest powers of the microscope, a comparison of different appearances at consecutive stages of development of the living cells, and the experimental investigation of the behaviour of cells and their aggregates to various reagents and stimuli from the environment.

You see, that if the experimental biologist voluntarily varies the environment of a given organism, and notices the behaviour in a sufficient number of instances, and notices also the behaviour under normal conditions in a sufficient number of instances, he will have collected enough facts to enable him to form conclusions as to the effect of environment and the usual and general behaviour of the organism under both normal and abnormal conditions.

Since the time of Darwin, experimental biology has received its fullest impetus, and especially so during the past ten or fifteen years.

Some of the most recent works published in English are those of E. B. Wilson, Hans Dreisch and J. W. Jenkinson, which I have been consulting, but many workers have been engaged both on the continent of Europe, in this country and in America.

But here should be noticed what we mean by environment. For scientific investigation this is no vague term to cover our ignorance. Although no final limit can be placed on the energetic character of environment as a whole, the forces which it contains, as every one knows, can be studied separately, and organic forms have been discovered to react to those forces, in an orderly manner, that is to say, in relation on the one hand to the orderly occurrence of various physical forces existing independently of living forms, and on the other to the maintenance of the end of individuality. It has been found that all organisms are affected by environment in certain modes and ways, and all organisms react to environment, that is environment is affected by the organism, relatively, with certain uniform results.

It is, however, quite difficult to state with absolute accuracy where environment ends and life begins. All we know is that there are such appearances as individually living forms, and these appear as being changed by other forms which do not maintain and reproduce themselves, and also the latter forms appear to be changed by the former.

For this reason in an approximate statement of where life begins, environment is stated to include factors external to the appearance of life and factors internal. Obviously to external factors taken as a whole, no limits can be assigned. They form the universe outside of ourselves which appears as unlimited. Yet in our common every-day experience we find limits every-where, and we find also different kinds or qualities of experience, limited and apparently unlimited. The judgment of the biologist applies, however, to qualities and limits in the environment which through appearance and measurement can be stated to affect the maintenance and the end of individuality. Those factors which occur *within* the total appearance of the organism as of like kind with those outside occurring independently, are termed *internal* factors, while those *outside* are *external*. The distinctive effect of, and on, the organism and its end of reproduction is the movement and reaction of life itself as related to its environment.

Now, as everyone who possesses the slightest knowledge of physical science is aware, the factors in the environment affecting organisms, consist of the various forces investigated in the domain of physical and chemical science, which are chiefly the force of gravity, mechanical agitation and velocity, electricity and magnetism, heat, light, atmospheric pressure, osmotic pressure (the pressure of fluids on structure of more or less resistance), and the chemical composition of the medium.

In reference to the maintenance, proliferation and multiplication of cell life, every cell may be stated to be affected by, and to affect the forces of the environment of all these kinds, always present in greater or less degree, and yet, notwithstanding such influence, the cell relatively maintains itself and pursues its end. But in the case of reproduction it is found that the distinctive movements and reactions of cell life on the environment are almost infinitely more complex, and they illustrate the fundamental principles of biological forms with a wonderful reiteration and manifoldness.

Following Dreisch we may say that during ontogenesis (that is, in the development of organic beings) there actually can be, and has been, observed a production of visible manifoldness, an epigenesis, or growth of new cells upon and from cells already living.

I am well aware of the conflict of this statement with the conceptions of what is termed the preformation and mosaic theories, and perhaps here I ought to say that investigators have conducted their researches on development, on the basis of one of the three hypotheses namely (1) that the structure of the new organism was in every detail preformed in the germs derived from the parents (preformation theory), or (2) its

general pattern was preformed (mosaic theory), or (3) that the germ cell is potential to the production of the new organism.

Of these three hypotheses I prefer the last, because it does not commit us to assumptions which cannot be proved. It is, also, more in harmony with the theory of energy generally as a universal postulate.

It leaves room for future developments and also in the possibility of effects on the part of external influence on development, *e.g.*, the practice and art of map. If every detail of human life has been and is predetermined by what has preceded, how could we speak of development in any sense and what would be the purpose and end of human endeavour. Whether the preformation or mosaic theories are true or not I prefer to leave them to their fate, because, if true, I know very little of your or my own preformations, whereas, under the theory of energy or potentiality I see things new (if old) continually being unfolded and the theory of energy appears to give me at least a share in the process.

Well now, on the basis of these remarks, let me invite you to consider some of the phenomena and factors concerned in development.

Most recent experiments have been conducted on the eggs of the sea urchin, as these are readily obtainable, they are produced in great numbers, and they appear most amenable to artificially induced alterations in the environment. I shall only casually refer to these experiments, but ask you to look at what has been known now for some years, the beautiful structure and series of changes which take place in the process of cell division, proliferation and multiplication.

[The lecturer then referred to

(a) The structure of the cell, consisting of hyaloplasm, spongioplasm, the nucleus, with vacuoles and chromatic and achromatic filaments. He also pointed out that the reflection and absorption of light is the most ultimate and most conspicuous effect of organism on environment.

(b) The phenomena of :

(1) Fertilization, natural and artificial. Effect of extreme differentiation in the environment, for example, in the case of sea urchins by extracting all the magnesium from the sea water in which they would naturally live, it had been found that structure resembling a "sport," or "monstrosity" had been produced.

(2) Rearrangement of filaments in the nucleus as a means to its division and multiplication.

(3) Equal division and its consequences, multiplication up to 2^{10} then rearrangement.

Time did not allow of further illustrations of variation, *e.g.*, from the point of view of magnitude, surface value, rate and direction of division, etc., but it was pointed out that these are all internal factors of environment which have to be taken account of in coming to conclusions on what the future of the individual was likely to be.

[The lecturer then continued.]

Now we have seen in these illustrations special emphasis of the principle I referred to a little while ago, namely, that the individual maintains itself to the end of reproduction, and especially is this remarkable when judging from our knowledge of physical forces it might be thought that the energy of the germ cell would be very quickly dissipated. The possession of this power of self maintenance going on to reproduction in the face of forces which would tend to destroy, is illustrated further by what physicians used to call the healing power of nature, or the *vis medicatrix naturæ*. Why should healing of tissue ensue after injury or surgical operation? Or why should a person recover unaided from disease the effect of factors in the environment internal or external?

If individual life was merely a sum of physical forces present and interacting in a given aggregate of cells, such healing and recovery would be absolutely impossible. Some astonishing illustrations of this wonderful power are coming under the notice of surgeons and physicians almost every day. I have not time to refer to these, and they would be familiar to you, but by way of emphasizing this feature of life as an illustration of energy and the power of individuality to reproduce itself, I wish to point to one more example taken from the lower forms of life.

It is what is called the *tubularia* experiment, and is referred to by Driesch in his *Science and Philosophy of the Organism*. The *tubularia* are polyps living in water, and consist of masses of protoplasm as fully organized collections of cells in the shape of tubes mounted by a head showing two sets of tentacles.

Now experiment has proved that if this head is cut off, or the organism divided at any stage of its length, an attempt is made by the energy of the organism through internal differentiation, which is often successful, to grow a new head (diagram exhibited). A certain length of the organism will always restore a new head by the internal co-operation of the parts of the system of the whole. But the success of growing a new head depends upon something, what do you think? What more simple than the size of the part that is left, to do duty for this purpose? A certain length will always restore a new head by co-operation of its parts, and therefore the biologist may conclude that the prospective value of each part is a function of the system as a whole, and the fate of every element depends on the size of the system. This is actually the case, and thus the German biologist, Driesch, has formulated his opinion on life, that every organism consists of a harmonious equipotential system with a single potency; that is, as the Greek philosopher, Aristotle, long ago pointed out, the single potency of *entelechy*, or possession of and working for an end in itself. It could not be stated, however, that the human body was equipotential in the same degree as a lower organism of the type of the *tubularia*, and this was because its cells had undergone a much wider range of intensity.

of energy and differentiation, and some of them had become united with inorganic material of much greater inertia than living cells, but relatively speaking the human body shared this feature, and one of the studies of the general biology of the human being was our aim to ascertain how far this was so.

Now in conclusion let me briefly indicate the bearing of these extremely general views of the forms and processes of life upon our knowledge and practice of medicine, and especially as they support and illustrate the philosophical character of our principles as an association of Homœopathists.

From what I have placed before you, you will be prepared for the statement that the truly scientific physician thinks first of the individual or personality, and secondly of parts of the body as related to the whole, and to the environment. In the practice of his art it would be thought that his appeal should, if possible, be primarily to the individuality of his patient as normally a relatively equipotential system with an end in its own health or recovery from disease.

As a matter of fact, this is what the Homœopathist does or attempts to do, I say attempts to do, for the subject of his knowledge is vast, his own knowledge as yet is imperfect, and life is short (*ars longa vita brevis est*). But he makes this appeal through his knowledge of the principle of *likeness* between the symptoms or effects of disease, and the symptoms or effects of drugs or other relatively strong influences brought to bear upon the human organism from the environment. The Founder of Homœopathy as a system of treatment, acquired his knowledge through experiments of this latter nature, and then by the application of the latter to the former appealed to the inherent vitality of the individual, in his tendency towards recovery or restoration from disease.

Let me say, and judging from what I have been able to place before you I think you will agree with me that if the facts of health and the facts of disease and the facts of drug or other strong environmental action can be accurately ascertained, and compared, the appeal to the nature of the organism through the principle of correspondence or likeness is the strongest appeal that can possibly be made.

But here comes in our second great vital principle, namely, that given the appeal to the individual on the plane of its own inherent nature and end, the finest differences and changes in the environment will be taken advantage of to the furtherance of that end. Such is evidently a law of vital change and end. And thus keeping the great principles of likeness ever in view, the physician finds that his resources for possible appeal are immensely widened compared to what they were in Hahnemann's day. In our day these resources include not merely organic (animal and vegetable), and inorganic (metallic and non-metallic) substances obtained from uncontrolled nature, but disease products and health products from organisms which have recovered from disease.

and in accordance with the law of their own inherent energy have become immune from further attacks.

The art of medicine to-day is based on knowledge to apply these substances on the basis of the great principle of likeness. Such practically covers the whole field of medicine, because of course in given cases the application of what we may term vitally dynamic principles has to be considered by comparison with a possible application of others (properly called allopathic) such as the induction of the direct effect of drugs and chemical, electrical or mechanical devices for the treatment of disease.

I cannot go further into the discussion of this vast subject, but may point out simply that the principle of the small dose, as adopted by Homœopaths, is in direct keeping with the great vital law I have been illustrating, namely, given the appeal to the immediate individuality of the patient, the very finest shades of difference are the means by which the energy of the organism will be strengthened and developed.

There would be no strain in speculative analogy in describing disease as a sport or monstrosity of the organism induced by causes unfavourable in the environment to the maintenance of its natural appearance and ends. As the external factors of the environment as a whole are unlimited, once the causes had found their sphere of operation, the symptoms and organic changes of disease had been the inevitable result. But if in accordance with the law of self-maintenance and end, the form and movement of life is still maintained, no hindrance appears to the mind, at least, that some appeal to the individuality, corresponding indeed in likeness as under other conditions a cause of disease, but as a fine but favourable change to the organism in its diseased state which, while life lasts, might conduce and reconduce to its recovery.

But I have said enough about this. I must look to the development and application of my knowledge, for upon us medical men, supported by the community to which we belong, is placed the responsibility of proving the old proverb "While there is life there is hope." And even if we cannot yet prove it there is another proverb which urges us on to try, "Hope springs eternal in the human breast."—The *Homœopathic World*, June 1, 1911.

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TUBERCULOSIS OF THE BONES AND JOINTS
AND ITS HOMŒOPATHIC TREATMENT.

By D. A. N. ROGATCHEVSKY, St. Petersburg.

"Tuberculosis of the bones and joints is to be found among the poor and among the rich, in the south and in the north, in the Swiss Alps and on the Russian Steppes—in a word—everywhere and in all conditions of life, and that fact must always be borne in mind."

Consumption appears in different forms and under different aspects, and is familiar to nearly everybody, but the struggle with it is extremely difficult, especially because, in its early stages, it insinuates itself unobserved into the human organism.

Childhood is a particularly favourable soil for consumption, and at this period, in the form of scrofula, rickets or affections of the joints—it prematurely carries off no small number of victims. Poverty, unsatisfactory and insanitary conditions of life, which undermine the effects of food and the development of the organism—are powerful factors in the contamination of the system by the tuberculosis poison. Such conditions are particularly noticeable in St. Petersburg, where, in 1908, out of 52,369 deaths, 5,894 were due to consumption. That is not surprising when one considers the damp, dark dwellings, the stagnant, well-like yards, the entire absence of proper venti-

lation, the crowded population, unfavourable conditions of life, and—most important of all—the injurious drinking water, from the Neva, the same as Lake Ladoga, utterly destitute of lime, which is so needful for the proper development of the organism. The result of all this is seen in the children's pale faces, spinal curvature, crooked legs, hump-backs, discharge from the ears, disease of the nose, swelling fingers, tumid joints, festering wounds on legs, hands or behind the ears, and so on. These are pictures only too familiar, not only to the doctors—but to the inhabitants of the capital themselves.

In 1897, in Russia, 289,874 cases of lung-consumption only were registered (which makes an average of 22.8 in 10,000). Ten years later—in 1907—were registered 545,070 cases (an average of 36.4 in 10,000). So we see that the number of persons attacked by this malady is increasing with dreadful rapidity.

It is more than time to found in Russia a league for the combat against tuberculosis—this national Russian disease—which is also the scourge of all mankind.

The struggle with tuberculosis would be more successful, if the organism itself were able to bring more strength into the struggle. Many different remedies and means have been, and are being, brought forward for the cure of tuberculosis in general and that of the bones and joints in particular, that important clinical form which comes within the surgeon's practice.

On the subject of this malady there is now an enormous number of medical works, but, nevertheless, one cannot say that adherents of the old school can boast of much success in their struggle with the terrible evil. For this reason it is highly important for both science and society that a closer acquaintance with Homœopathic treatment of tuberculosis of the bones and joints, should be diffused, together with better sanitary and general conditions, sea-air, sea-mud baths and so on.

This illness requires long and persistent care, and constant medical supervision is of the last importance; therefore, the

question of Homœopathic sanatoriums and hospitals, of Homœopathic scientific institutions where each variation in the course of the disease might be scientifically defined—is pressing and urgent. Then the public and the Allopathic doctors would be enabled to see for themselves, and be convinced of the success with which Homœopathy treats tubercular bones and joints.

It is much to be regretted, and one might term it a disgrace to Russian Society, that it is so indifferent and so slow in responding to any appeal for what is really urgent and necessary and is but too ready—alas—to tolerate this evil which has overpowered mankind almost ever since the foundation of the world.

The first idea of founding a sanatorium for allopathic consumptive patients in Russia—belongs to the Grand Duchess Ekaterina Michaelowna, who founded such an institution at Oranienbaum in 1872. Twenty-eight years later—in 1900—a second sanatorium was founded, near Windau, and now, at the present time, Professor Bobroff has built, at his own expense, a third sanatorium at Aloopka (in Crimea), for consumptive children. There is another private sanatorium at Tzarskoe Selo, and yet another—near St. Petersburg, at Sestoretzk, in memory of madame Kallatchevsky—which makes the fifth and last. In all, these five sanatoriums have about 500 beds—to an average of a hundred thousand tuberculosis patients. These are all, but we Homœopaths have not even got these, notwithstanding the fact that there is a pressing need for a Homœopathic sanatorium, because hundreds of thousands are now treated by Homœopathic means. It is impossible to speak of the Homœopathic treatment of tuberculosis of the bones and joints without first touching on the history of this disease, its essential features, the different Allopathic methods of treatment, with their results—up to the present time. Long before the birth of Christ, Hippocrates, “the father of medicine,” turned his attention to tuberculosis of the bones and joints and spinal cord disease resulting in hump-back; this latter illness being most graphic-

ally described by this learned man in his book entitled "About the Diseases of the Joints."

A systematic, scientific study of tuberculosis in general and of the bones and joints in particular—began only in the commencement of the nineteenth century.

In 1810, Baillet (in France) was the first to give a scientific explanation of this question. Towards the first half of the nineteenth century, a German professor, Virchow—who was the first to begin studying the life and death processes in the animal cell, proved that the changes found in tuberculosis patients and so-called "tubercles" are nothing foreign to the system, but are neoplasms consisting partly of living, partly of dead tissues; in other words, tubercles form a part of the living tissues of the body. Virchow also discovered that tuberculosis of the bones and joints and tuberculosis of the lungs are identical, one with the other, although, of course, there may be tuberculosis of the bones and joints, but not of the lungs, and *vice versa*. From 1880 onwards, the structure of the tubercle was much studied and its contagious nature was fully proved. In 1882, Koch discovered the germs of tuberculosis in the form of rod-shaped bodies, which are now termed "Koch's bacilli." In 1888, our Professor Metchnikoff, by his discovery, showed us the struggle between the tuberculosis germs and the gigantic cells which act as the defenders of the human organisation. Metchnikoff's discovery (called by him "phagocytosis") which is that the white blood globules, and the gigantic cells have the power of devouring the harmful germs—threw still more light upon the disease. So that in 1890—the question of the nature of tuberculosis in all its above-mentioned forms—was sufficiently clearly explained together with its causes; the whole aspect of the illness was studied, and the treatment of tuberculosis of the bones and joints by operation was widely diffused. But as, even after the most successful operation the illness often recurred—as well as frequent complications of the internal organs—in the form of tuberculosis of the lungs, and tuberculosis of the brain teguments (mening-

itis), there began (especially in the year 1890) a whole series of researches after remedies for tuberculosis in general, and tuberculosis of the bones and joints in particular. A tremendous sensation was caused in 1890 by Koch's statement concerning his discovery of the most infallible remedy, named by him "tuberculin." Eventually this remedy failed to justify the confidence placed in it, and profound was the disappointment of the whole medical world at the failure of Koch's first experiment with tuberculin. Five years before Koch, a Homœopathic doctor in London, Dr. Burnett, treated his consumptive patients with tuberculin, which he called "bacillinum"—but only in very small doses, which were introduced into the system not by means of injection, but internally, in the form of drops and grains.

It is interesting to note, that, at the time that Koch was keeping his discovery a profound secret, a problem to the whole medical world, Professor Jäeger, at Stuttgart, boldly declared that, in his opinion, this secret remedy, then called "Kochine" was none other than tuberculin. In addition to which statement Jäeger maintained that every consumptive patient could be cured only with his own tuberculine.

Notwithstanding their almost total failure, the researches after anti-tuberculosis remedies were still continued. Different kinds of serums were tried, preparations of iodine, chloride of zinc formaline, kerosene (petroleum) and so on. Local tuberculosis was treated by stoppage of the circulation, and surgeons, on their side, essayed a whole series of operative remedies, including the famous method of treating hump-back, discovered by the French surgeon Kalo, which created a great sensation in 1897, and ended in the most pitiable failure.

At the commencement of the present century, medical opinion regarding tuberculosis underwent a great change, and most doctors (although unhappily, not all) have come to the conclusion that nourishment *régime* and proper sanitary conditions are of the first importance.

Up to the present time, the medical world is divided in its

opinion as to the treatment of tuberculosis of the bones and joints and while one half of the medical faculty declares that everything must be left to nature, and that we can only do our best to improve the conditions in which the patient is placed, the other half, on the contrary declares that the diseased parts of those bones and joints affected ought to be immediately removed by operation. Meanwhile, this fearful disease is spreading, carrying off thousands of victims to another world, or else making them a burden to themselves and others.

Patients with tuberculosis of the bones and joints form from three to twelve per cent. of the usual number of patients in surgical hospitals, and in special surgical institutions for children the percentage is far higher. For example, in Prince Oldenbourg's Hospital for children, in St. Petersburg, the number of children suffering from tuberculosis of the bones and joints amounts to nearly forty per cent.

This is not in the least surprising, for tuberculosis of the bones and joints—"caries" of the bones—is an infectious illness, caused by the same infectious germ as tuberculosis of the lungs,—that is to say, by "Koch's bacilli."

There is no worse infection than this, for one fifth of all mankind perishes from lung-consumption only. But not only from without, from a man's outside surroundings can the tuberculosis poison penetrate into his system, it can also be transmitted to him by inheritance. Added to which, in the latter instance, the beginning to the disease may be transmitted by the parents to the children, or they may, at any rate, inherit the tendency to consumption, and then the poison, meeting a favourable soil, penetrates easily into the system. Whilst speaking of a tendency to consumption, it is necessary to point out the possibility of hidden tuberculosis, which, at the first convenient opportunity, is ready to show itself openly. For this reason the irregular growth of the organism, various derangements in breathing, in nourishment, peculiarities of temper, of tastes and so on; unfavourable conditions of life—especially living in cellars in tiny dark flats without air or light.

(of which most houses in Petersburg can furnish at least one example)—all this undoubtedly prepares the way for consumption.

The tuberculosis germ penetrates into the system by every possible path, through the breathing and digestive organs and through injuries, which latter path of contagion is so well known that every fall, contusion, sprain, prolonged diarrhoea, etc., is enough to throw careful parents and guardians into a state of alarm, and make them turn to the best available doctors for help and explanation of the patient's state of health; the Roentgen rays are brought into requisition to explain the matter, and so on. Although, at the present time, there exist many opinions concerning the significance of injuries in tuberculosis, opinions sometimes totally opposed one to another, still as regards the fact that injuries do very often compel hidden tuberculosis to break out openly—there can be no two opinions. Although tuberculosis of the bones and joints is a disease which mostly attacks those of youthful years, it is also to be met with in middle-aged people and even in old people, in which case, the older the patient, the worse is the process. So it seems that no age is exempt from this terrible foe. Concerning those parts of man's bone system in which tuberculosis is more generally to be found—the first place must be given to the bones of the trunk, particularly the spine, which is most of all liable to tuberculosis, then the bones of the lower members, and finally those of the upper members. Tuberculosis may affect one bone or joint, or a whole group of bones and joints in close connection with one another—or else it may affect bones and joints at some distance apart. At the basis of every tubercular affection of the bones and joints, lies the tubercular nodule. The progress of this nodule is different, in different cases. Sometimes it passes into a so-called coagulated condition, sometimes it wraps itself round with a fibrous web, sometimes it becomes steeped in lime, and becomes itself lime, sometimes, the tuberculosis germs find their way into the sanguiferous or lymphatic systems, and then develop into tuberculosis of

the brain teguments (meningitis) or finally miliary tuberculosis.

Very often the tuberculosis-centre becomes infected with decaying and even putrefying microbes and then, to the tuberculosis is added suppuration, or still worse, putrid decay of the fibres. Cold abscesses are a frequent complication of tuberculosis of the bones and joints. In whatever form tuberculosis of the bones and joints appears and whatever part of the body it attacks, it must always be remembered that it is a local process with a tendency to destroy the affected organic parts; therefore, to treat the patient only with the forces of nature without any other means, would be too risky, and, therefore, different remedies must be applied in due season, and according to necessity. Before touching on the different ways and means of treating tuberculosis of the bones and joints, we will try, as far as possible, to put before ourselves as complete as possible a picture of the disease-process.

The first signs of the beginning of tuberculosis of the bones and joints are generally one or all of these: pain in the affected part, pain of every possible kind, aching, shooting, gnawing; neuralgic pain, spreading in different directions; increasing at night, depriving the patient of sleep and appetite. When such pains appear, even in conjunction with every outward appearance of radiant health, physical strength, and the best nourishment, the most serious attention must be paid to these symptoms, and the affected parts must be examined by the Roentgen rays.

The second sign of tuberculosis is the diminishing size of the part affected. Later on follows the peculiar position of the joint, namely its bending in a greater or lesser degree. Then the joint or part of the bone begins to swell, the skin, covering the diseased spot, becomes particularly pale and glossy, and the veins show clearly. Often the swelling is accompanied by a fluid, but the pain is of the slightest. In time, the skin covering the swelling becomes red in places, very thin and then slightly raised, an abscess forms which quickly breaks and

an opening is formed which heals up very slowly, and is called a fistula. Out of this fistula flows a thin, gelatinous matter, with various admixtures such as torn tissues, blood and grains of bone sand. It is highly important that the fistulas should be kept clean. When they become dirty the matter changes its aspect, gets thicker, like the matter from the usual "hot" abscess, and acquires the horrible odour so familiar to many people.

One fistula is followed by a second, a third and so on; not only in the diseased part, but occasionally at some distance from it.

If the matter does not run out of the fistulas, then it accumulates in the form of so-called "cold abscesses," also not infrequently at a considerable distance from their primary source. We have been called upon to treat patients who, in spite of their radiantly healthy outward appearance, for no apparent reason whatever, were afflicted with an enormous swelling on the front of the upper inner part of the thigh. This swelling was hardly at all painful, with slightly reddened skin, but greatly hindering the movement of the leg. Two weeks after the beginning of the treatment, the swelling generally opened and six or eight glasses of liquid matter, without any smell, flowed out. Such a position of the abscess indicates, among other things, the presence of tuberculosis of the body, spine, lower part of the breast or the loins. In general, judging from the part of the body on which these "cold abscesses" appear, it is possible to indicate their source with more or less certainty.

Tuberculosis of the bones and joints acts in different ways on the general condition of the patient: in some cases his general condition is but slightly affected, and from his outward aspect it would be hard to say that he was in the clutches of a terrible foe; in other cases we see a picture of the general exhaustion of the whole system; the sufferers grow thinner and whiter, their eyes acquire a peculiarly hopeless expression, hands and feet swell, and the fistulae putrefy. Such patients drag out

their miserable existence, a burden to themselves and to others, and their sad aspect arouses pity in all beholders.

To such a picture of local tuberculosis there is often added tuberculosis of other internal organs, because the latter attacks a considerable percentage of those who are already ill with tuberculosis of the bones and joints. Consequently, every local appearance of tuberculosis must be regarded as a very serious illness—threatening the patient's life. Every means must be employed in treating it, and if, after apparently successful treatment, all outward signs have disappeared, it must always be borne in mind that there may still be a condition of hidden tuberculosis, ready, at any moment, to break out once more, and attack one or other of the organs. So that constant medical supervision, even after an apparently full recovery, is an absolutely necessary measure which, if neglected, may result in bitter reproaches and regrets, often, alas!—too late!

It may seem strange—but only thirty or forty years have passed since serious attention was turned to the general treatment of tuberculosis. Up to then, everything was left to the wonder-working powers of nature, and yet, at the same time, little was done to take advantage of them. Every kind of treatment and the most serious operations were largely in favour, but little attention was paid to the general state of the organism. Nevertheless the fact always existed and does continue to exist, that, although tuberculosis of the bones and joints is supposed to be a local complaint, still it may become general, and *vice-versa*. In old times it was generally known that those suffering from scrofula, anæmia, or tuberculosis, speedily recover when sent to the seaside; but as speedily return to their former condition directly the seaside climate is exchanged for a continental one.

Sea baths, sea air, so pure and so rich in ozone; which from being ever in a state of motion, and ever replenishing its store of ozone from the sea, is rich in every kind of salt; all these combined, form a powerful means whereby the defensive forces of the organism are strengthened for the struggle with the

tuberculosis. If the above-mentioned elements can be augmented in quantity or others akin to them, the struggle with tuberculosis will be still more successful. On the one hand we can point to the estuaries, on the other hand to those sea-shores which are covered with pine and fir forests.

Our estuaries, especially the Odessa estuaries, of which Kooyalnitza is the best—have no rival in the world. Besides the Kooyalnitza estuary, near Odessa, there are others, Hadjibivsky, and Klein Liebenthal (Dry Estuary), but these two last-named are weaker in their effect than Kooyalnitza. Situated on each of the estuaries is an excellently well fitted up institution for the treatment of tuberculosis of the bones and joints. Here there is everything possible for augmenting metabolism, for drawing the bad essences out of the patient's system, and healing the diseased organs. This is largely helped by the dry air, abundance of sunshine, high temperature, nearness of the sea and the large quantity of salt, both in the water and in the mud. It is much to be regretted that our watering-places are so little popular, but no one who has once tried the treatment on an estuary has ever regretted it. Notwithstanding this fact, northerners are afraid of the southern heat, and are, therefore, unwilling to visit the Odessa estuaries, and even the Petersburg doctors frighten their patients with the difference of climate, possibility of catching cold, etc.—all of which, in reality, is not capable of standing criticism. It is no reproach to the doctors that the greater number of them know little about the mud-estuary treatment in general, and about the treatment on the Odessa estuaries in particular. Notwithstanding this, the Odessa estuaries may still boast proudly of their large number of visitors. On Kooyalnitsky estuary alone, the number of patients in one summer is from twenty-five to thirty thousand. These figures speak for themselves.

Besides the Odessa estuaries, the treatment of tuberculosis of the bones and joints is also carried on in "Old Russia," at Saki, Mainaka, Slaviansk, Druzenik, Arensburg, Hapsal, in the Caucasus and other places.

Among the seaside watering-places of the second kind, where sea-air and sea-bathing are combined with an abundance of pine and fir forest, the best is certainly Hungerburg, which deserves to rather be called "Wonderburg," so well does it merit the name.

Situated at a distance of twelve versts from the town of Narva, and 160 versts from St. Petersburg, for the latter it is a real treasure-trove, because there is no city in the world where there are so many suffering from scrofula, rickets and tuberculosis as St. Petersburg.

If we look at Hungerburg from the top of its lighthouse, we see a rare picture: on one side is the sea, on the other a dense green mass of forest. Houses and buildings are quite invisible. Between the forest and the sea there stretches for ten miles a wonderful sandy shore, warmed by the sun's rays; a rare place for bathing, walks, children's games and sand baths. Here the air is particularly pleasant and easy to inhale, full of fragrance, salt and ozone.

Natural ventilation and continuous air-currents are supplied by the two enormous reservoirs of air, forest air and sea air. People who do not understand the full significance and profit of these air currents, are even inclined to complain of them, asking, what is good at Hungerburg, it is always windy.

Nevertheless, the beneficial influence of the Hungerburg climate particularly depends on these air-currents mingling the breath of the pines and the evaporation from the sea. To which must be added the wonderful action of the sun's rays here—penetrating through this air, chemically decomposing many of its compound parts and causing that healthy sun-burn so pleasant to see—to which nearly everybody in Hungerburg is subject. There are very few local inhabitants there, nearly all are summer visitors, amounting to about fourteen thousand. But this figure is almost unnoticed in Hungerburg, there is so much room, land, forest and sea.

There are two good medical establishments with every kind of bath and many extremely nice boarding houses. But here

also, as in so many of our watering places, something is wanting. The administration does not concern itself in the very least about the well-being of Hungerburg, and does absolutely nothing to develop it and to bring it forward.

First of all, it ought to have a straight railroad and steamboat connection with Petersburg, which could quite easily be arranged. Then simple justice demands that all funds, collected in Hungerburg, for its improvement, should be devoted entirely to that aim, and not be added to the funds of the Narva Town Council, and be disposed of as that body thinks fit. This is due to the fact that all the land round Hungerburg was, at one time, the property of the King of Sweden, who presented it—in the good old times—to the town of Narva, which, in its turn extracts from its vassals all it can get.

Finally, Hungerburg could undoubtedly flourish if it were put on the footing of a town.

I have said rather more about Hungerburg, because it possesses all that is needful to make it a watering-place of world-wide renown, and its sea-beach with its velvety sea-bottom, is a rarely valuable possession, especially for such cities as Petersburg.

Our Steppes, with their koumiss (mare's milk) treatment, our Volga with its beautiful villa-banks, and lengthy, beneficial steamboat excursions, our mountain spots in the Ural and Caucasus—all these are powerful factors in the struggle with tuberculosis, but all demand a large outlay of money, which is not possible for every one.

As to foreign watering-places, as regards expense they are not even to be mentioned.

Besides the above-enumerated methods of fighting the tuberculosis poison, various attempts have been made to discover such means as would give the organism itself the possibility of coming out victor in the struggle with the beginning of the disease. The best remedy is held to be Koch's tuberculin, and its different forms, but it is to be regretted that they have not justified the hopes reposed upon them. Then have been tried

different preparations of *Cinnamic acid* (Lander, Gontcharenko, Kotovshifoff); preparations of *cantharidinate of potash* (Libreich); preparations of *iodine* (Frassey); anti-tuberculous serum (Maragliana, Marmarek, Neporojneff); but, although in some cases, these remedies have given a certain insignificant percentage of improvement, in other cases they only aggravated the malady with the worst possible results.

From the local methods of treating tuberculosis of the bones and joints, we will point out the following ones in use at the present time. When it has been decided to leave the whole thing to nature, then the diseased spot or member is placed in a position where it can have the most complete repose, which is further brought about by putting the patient to bed, and by the use of all kinds of bandages and immovable irons. Special methods of stretching out or of contracting are adopted, forcible bending back, like the treatment of hump-back by Kalo's method. There are also treatments by dry air, moist heat, dry cupping, massage, active and passive gymnastics, light, and the Roentgen rays.

The direct action of medicinal matter on the tuberculosis-centre, is very widely employed. To this end medicinal fluid is injected into the diseased spot. To this treatment are used preparations of *iodine*, *arsenical acid*, *copper*, *zinc*, *calcium*, *tannic acid*, *carbolic acid*, *sublimate*, *iodine*, *iodoform*, *bone coal*, *camphorated naphthol*, *salol*, *cariophil oil*, *formaline*, *guajacolum*, *chinosolum*, *theucrine*, *aniline paint*, *chlorate of zinc*, *enforbilia assa*, and even plain *Kerosene* (Benningof), and many other like remedies, without number or end.

Scraping out or draining out the affected part is also employed but it is not very highly thought of. The diseased spots are opened and cauterized, or cut out or cut off, and finally the joints are extracted, or the whole limb is cut off.

It has been necessary to give this short enumeration of the various methods of treating tuberculosis of the bones and joints in order to show how much energy human beings have expended

and are still expending on the search of the best means of battling with this terrible foe.

In treating our patients (amounting to 300), by homœopathic means, the chief thing remarkable is this, that the entire treatment is carried on in the same surroundings as those in which they fell ill, and the means chiefly employed, are those which can, in one way or another, strengthen the defensive powers of the system in their struggle against the tuberculosis poison. Wherever it has been possible, everything has been done to improve the general condition of the patient. Of course it is impossible to deny the beneficial effect which special diet, hygienic surroundings, treatment at the estuaries, fresh air, whether it be at the sea or on the hills or steppes, sea-baths, and so on, have the ultimate issues of the illness.

We order our patients to make use of the diseased parts for this reason, that when the patient is in a motionless condition or fixed up in immovable bandages or irons—the diseased spots and the tissue surrounding them shrink from inactivity, concretion takes place, and that which formerly moved, bent and unbent, becomes almost immovable and useless. When, for example, the joints of the legs are affected, our invalids walk about every day; if a joint becomes inflamed, with great pain, rendering movement difficult, then the patient is allowed to rest for a few days; we treat the inflammatory process, and directly it is possible, we make the patient move about again. Motion before sitting is considered especially helpful, because (besides the reason above-stated) when the internal organs are attacked by tuberculosis, this action still continues; because, when the diseased organ does not cease to work, it is well known that the system, as a whole, has a wonderful way of accommodating itself to everything. Take, for example, the fact that when one lung is impaired, the other lung, in order to fulfil the double work laid upon it, becomes twice its original size and capacity.

We (homœopaths) have never used any cutting, opening,

scraping out, or pumping out, because, according to our views during the bone-tuberculosis process, it is impossible to burden the organism with another wound, a new diseased spot which will demand more and more strength to heal it. It is impossible to exact everything from the system, to take away and to give nothing in return; all the more so, that interfering thus it is impossible to be sure that the diseased spots are completely removed and that nothing remains. Not only that, such surgical interference opens out a wide net-work of lymphatic and sanguiferous vessels—in close proximity to the disease centres—and for that reason the tuberculosis poison can readily penetrate by these paths, into other parts of the system; new disease-centres can be formed, and thus the local process may pass into a general one, until it becomes recognised consumption, and the only result is to hasten the sad end. After operations scars are liable to appear in places where their presence may vitally hinder motion, finally resulting in total inactivity. When the diseased spot is scraped or pumped out the result is generally winding fistulas, and irregular cavities, which make it very difficult for matter to come away, and may even lead to its accumulation, which is not at all desirable. However tempting surgical interference may be at the first glance, with its endeavours to finish with the disease-process once and for all, it not seldom happens that one operation is followed by a second, a third, a fourth, until at last the exhausted organism perishes under the surgeon's knife, or until general consumption sets in—which is no better. It is, therefore, much to be regretted that, in cases of tuberculosis of the bones and joints, specialists for internal maladies or children's illnesses, so readily yield up their patients to the surgeon, or, it may be, send them to him themselves, notwithstanding the fact that the treatment of the patient's general conditions, even if the local treatment of tuberculosis has been temporarily given up, is of enormous importance, hardly less so than that of surgical interference in the disease-centre. If the treatment of tuberculosis of the bones and joints were more generally regarded in

that light, there would be fewer unfortunates, especially children who arouse pity in all who see their miserable condition.

Virchow, that founder of pathological "cellular" theory, said once, that the changes in the tissues, caused by disease, have been discovered (pathology), but that cellular therapeutics will hardly be discovered. Nevertheless, the founder of homœopathy, long before Virchow's time, adopted cellular therapeutics most successfully, using homœopathic medicines, and at the present time, in the treatment of tuberculosis of the bones and joints, this system shows itself to be most salient.

Metchnikoff's discovery of "phagocytosis"—that is to say, of the nature of the white blood globules to war against the enemy of the organism showed plainly that the treatment which is most capable of strengthening the white blood globules in their struggle against the tuberculosis bacilli, is the best and most rational for cure of bone and joint tuberculosis. Metchnikoff's idea gave an impulse to a whole series of experiments on these and such-like means.

What has not been adopted, has not been tried, even to the injection into the diseased spot of ordinary kerosine (petroleum) (Beningoff) ? What have the unfortunate patients not suffered in consequence of these experiments, and all in vain ; the results being all more or less unsatisfactory, chiefly, because the life of the organic cellular tissues and their activity was, for the most part, ignored. It was no business of the experimenter's what became of the unfortunate cellular organism, already worn out with tuberculosis poison, when regaled with injections into the disease-centre, of some kind of *camphorous naphthol*, always followed by strong inflammatory reaction, with the possibility of a stoppage of the blood vessels. If there was any measure of success, it was only thanks to God's mercy that such a frightful danger as a stoppage of the blood vessels had been spared the victim of these experiments.

In homœopathic treatment it is impossible that such a thing could happen. In this treatment the life and action of the

cellular organism is of the first importance. If the tuberculosis germs penetrating into the human organism, destroy the cellular elements, first in tubercles and then spreading further and further; if in this process of destruction, the defenders of the system, the cellular tissues themselves on the one hand, and the "leucocytes" on the other hand—are not in a condition to resist the pressure of the general foe, then homœopathy possesses means, so sure and tried, that there can be no hesitation in adopting them.

One of the best of these is "*Hepar-sulphuris*," which is generally used for this purpose, in low potencies. Possessing the power of augmenting the afflux (leukocytosis) of the white blood globules (leucocytes) in that place where they are most needed, *Hepar-sulphuris* at the same time increases the strength and activity of the latter.

This remedy when taken internally, arouses the white blood globules to a more energetic destruction of the tuberculosis germs in the diseased spots. The leucocytes, acting on the organism, as the most favourable centre of action, easily search out the foe, wherever he may be. The action of the white blood globules develops all the more energetically, because in my opinion *Hepar-sulphuris* promotes an increased working out in the blood of a corresponding "opsonin" (recently discovered by Wright, in England), the presence of which, as proved by experience, is undoubtedly necessary for the manifestation of activity by the white blood globules. In this way, *Hepar-sulphuris*, promoting the growth of opsonin in the blood, strengthens the defensive powers of the system in their struggle with the tuberculosis poison and renders that struggle successful. At the present time, we see the allopathists trying very much the same method of treatment; instead of the former frequent and large doses of *tuberculin*—small and infrequent doses are given (the same as homœopathic) by Dr. Neporjneff and Sokoloff, in St. Petersburg, and, it must be owned, that a far greater measure of success has been attained than by Koch, in Berlin, or by Doyen, at Davos Platz in Switzerland.

The tuberculosis germs, driven out by the white blood globules, obliged to take their departure, press to the side of the least resistance, which is the lymphatic system. But on this path they are hindered by the lymphatic glands which are disposed the whole length of the lymphatic system. If the pressure of the tuberculosis germs be very great, and if the lymphatic gland cannot resist them, then they perish in the struggle, their tissue is destroyed, the glands become coagulated and perish. In this way the road is cleared and the tuberculosis poison can penetrate wherever it likes. In order to prevent this and so to strengthen the lymphatic gland, that may be enabled to successfully resist the foe, Homœopathy possesses an excellent remedy which is *Mercurius solubilis*, and which we employ in cases of tuberculosis of the bones and joints in small doses. *Mercurius solubilis*, besides its other spheres of action, acts especially beneficially on the lymphatic gland apparatus. Its action consists in arresting the threatening suppuration, healing the spreading wounds, increasing the vitality of the tissue elements of the glands, and their powers of withstanding the enemy, the result of which is victory over the tuberculosis germs.

The germs, in their struggle to get free, try to make their way to the surface; first of all there appears a swelling in some part, the skin covering this part gets thin and shiny, then slightly red, and soon the swelling opens and generally a good deal of matter comes out, and the place heals again very quickly. The fistulæ caused by the action of matter have a fairly straight course, and do not tend to sinuosity or irregular cavities. Consequently the matter is not detained, but comes away freely and easily. On the opening tuberculosis swellings and inflammation *Hepar-sulphuris* and *Mercurius* act in such a way as to increase the coming-away of matter and hasten the healing-up of the diseased spot. As an outward aid, until these swellings open, we employ *Belladonna oil*, which is pain-soother on the one hand, and by its even warmth helps the action of the white blood-globules on the other. Having well rubbed.

the place with *Belladonna oil*, we cover it with soft bandage. This is repeated two or three times in twenty-four hours. If the tuberculosis swelling has, for some reason or other, become inflamed, and the pain has increased, then, instead of the *Belladonna oil*, we use heating compresses of *Calendula*, until the inflammatory process has ceased, when we once more continue the treatment with *Belladonna oil*. 'Cleanliness of the wounds is an absolute necessity for their speedy healing. The wounds are washed three times a day with a solution of *Calendula*, and dressed with ointment of *Calendula* or *Hydrastis* : it depends whether the wound needs healing or whether the inflammation surrounding the fistula-opening requires lessening.

At the same time general or local baths of sea-salt are ordered with the aim of reinforcing the metabolism stimulating the skin layers, increasing the appetite and so on. Under the influence of the salt water, the discharge of matter from the fistulæ becomes more active, then it diminishes, the fistulæ are free and begin to heal up, and the diseased spot is soon covered with scars.

Together with the two above-enumerated homœopathic remedies, we also use *Calcium* salt, First, in the form of its carbonate *Calcarea carbonica*. (This salt in homœopathy, is procured from oyster-shells, between the inner and the outer hard casing). Secondly we use *Calcium* salt in the form of the phosphate of lime, *Calcarea phosphorica*. These salts add to the nourishment and strength of the patients, and also aid in the saturation of the tissues in the disease-centre with lime. Both are used in low potencies, from the third centesimal and lower. In order to increase the patient's nourishment, when swelling of the bones and joints appears, and also when the suppuration process has begun, and its force and durations may act fatally on the patient's condition, exhausting their strength, we generally employ yet another silica—*Silicea*—internally and externally in the sixth dilution or lower. So that according to the patient's condition, we often employ one or the other remedy. A complete cure requires time, and some patients have required treatment for three years.

Tuberculosis of the bones and joints is a chronic disease, and therefore its cure is a lengthy one, for this reason, that, in the struggle with this foe, we are obliged to have recourse to remedies which, when taken for a long time, will not disturb or injure the system. Such remedies are the Homœopathic ones above enumerated. We cannot refrain from calling attention to the fact that, in cases where Allopathic doctors have found it needful to open, cut away, scrape or pump out, and so on, *Hepar-sulphuris* has fully replaced the surgeon's knife only with the difference, that, for the reasons given above, there has been absolutely no danger of the tuberculosis spreading and becoming general, no fear of part of the diseased centre being left, of concretion taking place, bringing with it immovability of the joints, or that the fistulæ should become sinuous and irregular cavities should be formed, retaining and accumulating matter.

As ours were all out-patients, we were obliged to treat them under those same circumstances and conditions in which they fell ill; although, of course, for that very reason the treatment necessarily takes much longer, but that is only another proof that homœopathic remedies and nothing else have been instrumental in strengthening and aiding the defensive power of nature in their struggle with the tuberculosis poison, and enabling them eventually to emerge victorious.

I cannot refrain from repeating the story of a plain workman in the Oboukoff Foundry. Feodoroff is the father of a boy who was treated by me for tuberculosis of the processes of the temple-bone, just behind the ear. The boy is now ten years old and is as healthy and rosy-cheeked as possible; no defect has remained; he is active and merry, and learns his lessons as well as possible; no one would ever suspect him of having had tuberculosis.

These are the father's own words. "My son Michael was born on October 23rd, 1899, perfectly healthy and up to the age of three years he never had anything the matter with him. Then appeared a discharge from the right ear, which continued

for more than a year. Acting on the advice of my relatives, I took him to the German hospital on the Vassilevski Ostroff, where he was examined by an aurist. I took him there four times, and each time the doctor handled the boy's ear till it bled, and after that I ceased going there. Shortly afterwards the discharge ceased. Then the boy fell ill with pleurisy, then measles. About four months after all that, at the end of October, 1903, the boy began to complain of pain in the right ear. When I enquired the reason, the boy answered that, in the summer, another boy had thrown a stone at him, and hit him just behind the ear. Two days after he told me this, the pain in the ear got so much worse, that the boy screamed day and night, and then a swelling appeared behind the ear. Then I took him to the Prince Oldenburg Hospital for children, where the lady doctor told me the boy had mumps, and gave me some medicine, which I threw away, because I was convinced that my boy had not got the mumps, but something else. From there I went to the Court Hospital, near the Taurid Garden, where the doctor refused to treat the child, saying he could do nothing for him. I was obliged to return home without any result, and the unfortunate child was utterly exhausted and screamed all night. Next day I asked our Foundry Dr. H., to examine him, and he told me the child must certainly be operated upon, which I refused to allow. Then I took the child to the hospital, to the aurist, Dr. O., who gave me ointment to be rubbed in behind the ear, and bandages. Wounds and matter appeared, the treatment continued for a whole year, then the doctor prescribed ointment and drops. Finally, the aurist informed me that an operation was necessary, and that the patient would be under chloroform for two hours. I refused to consent, and took the boy to another aurist, Dr. Sh., who also said that without an operation it would be impossible to effect a cure. Once more I was obliged to consult another specialist, Professor O. He treated the boy for one and a half months, and then declared that an operation was absolutely necessary, or else I should lose the boy. Once more I refused to risk the operation, and decided to try the Homœo-

pathic method of treatment. After that the boy got better and better, the symptoms of disease gradually passed away, and eventually my son recovered, his hearing is not in the least impaired, and he is now in excellent health."

Such is the short history of the sufferings and wanderings of this poor little sufferer from tuberculosis of the bone, in a city like Petersburg, where there would seem to be everything for the speedy and efficacious treatment of such illness. In spite of all the unhappy father's efforts and researches, none of the Allopathic doctors had anything but surgical interference to offer him. Homœopathy, in this case as in many others, fully replaced the surgeon's knife, and restored health there, where surgical interference would never have been able to do so completely. We must also remember that the treatment of this body was carried on, not in an expensively appointed hospital, but in the modest home of an ordinary workman, where the illness first began, and the remedies used were the same as already described.

In finishing this, our short sketch of the treatment of bone and joint tuberculosis, it is impossible not to regret that in Russia we have not Homœopathic hospitals and sanatoriums where the treatment of such patients could be carried on for all to see, where everyone who wished to do so, could see for himself and convince himself, how successful Homœopathy is in dealing with tuberculosis of the bones and joints.

It seems incomprehensible that Allopathic doctors, after having tried every imaginable means for the cure of tuberculosis of the bones and joints, even to the injection of simple *kerosene* (petroleum), into the disease-centre, should not only refuse to try, but even to hear of, the adoption of our remedies in the struggle with this foe. It is time to leave routine and to study and examine that system of treatment (Homœopathy), of the basis of which up to now, not one word has been uttered during the whole course of study of medicinal science in our Higher Schools.

In America, that country of every kind of progress, nearly one-third of the population is treated by Homœopathic means, and the Homœopathic Medical Colleges in Philadelphia, Boston, Chicago and other towns include hundreds of professors and lecturers and thousands of students.

The time will come, and it is not far off, when the Allopathic doctors will be obliged to confess what the learned Berlin Professor Behring, the investigator of the serum treatment, says in his book.

The book is entitled "Modern Physiogenetic and Physiotherapeutic Problems in an Historical Light." Prof. von Behring, Berlin, 1906. In the preface, on pages, xxvi-xxvii, the honoured Professor writes as follows: "In spite of all scientific speculations and experiments regarding small-pox vaccination, Jenner's discovery remained an erratic block in medicine, till the biochemically thinking Pasteur, devoid of all medical classroom knowledge, traced the origin of this therapeutic block to a principle which cannot better be characterised than by HAHNEMANN'S word:

' HOMŒOPATHIC.'

"Indeed, what else causes the epidemiological immunity in sheep, vaccinated against anthrax, than the influence previously exerted by a virus, *similar* in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of the influence, exerted by a *similar* virus, than by Hahnemann's word:

' HOMŒOPATHY ' ?

"I am touching here upon a subject anathematised till very recently by medical pedantry; but if I am to present these problems in historical illumination, dogmatic imprecations must not deter me. They must no more deter me now than they did thirteen years ago, when I demonstrated before the Berlin Physiological Society, the immunising action of my *tetanus anti-toxin*, in one millionth dilution. On this occasion I also spoke of the production of the serum by treating animals with a poison which acted the better the more it was diluted, and a

clinician, who is still living, remonstrated with me, saying that such a remark ought not to be made publicly, since it was grist for the mill of homœopathy. I remember vividly how Dubois-Reymond, who during the progress of the demonstrations and discussions had become drowsy, suddenly sat up all attention, when I replied in about these words:—

“Gentlemen, if I had set myself the task of rendering an incurable disease curable by artificial means, and should find that only the road of homœopathy led to my goal, I assure you, dogmatic consideration would never deter me from taking that road.”

“It seems to me,” continues Professor Behring, “that the words isopathy and isotherapy, homœopathy and homœotherapy have received their right of citizenship in medicine, without the modern Homœopathists having the right to declare that fortune is more in their favour now than at the time when scientific medicine was not yet burdened with my serum therapy.”—*The Homœopathic World*, July 1, 1911.

EDITOR'S NOTES.

False Teeth.

There are said to be in this country eight factories devoted to the manufacture of artificial teeth. Last year the manufacturers sold over 60,000,000 of these teeth and this year they expect to sell between 78,000,000 and 80,000,000; and every one of these teeth goes to replace a natural tooth which, if given proper care and attention should have remained sound the entire life time.—The *North American Journal of Homœopathy*, June, 1911.

Sugar as a Drug.

Sir J. Sawyer has found sugar—just ordinary cane sugar—to possess valuable therapeutic properties and has used it freely in his practices. He claims it to be indicated in all forms of adynamia, building up weight and strength in a very satisfactory manner in debilitated conditions of the system, and free from the nerve-exciting factor associated with the ordinary tonic.—The *North American Journal of Homœopathy*, June, 1911.

Vaccine Therapy.

The *International Journal of Surgery* for October has an editorial on "The Limitations of Vaccine Therapy" introduced about six years ago by Sir E. A. Wright. Among other things the *Journal* says: "As Wright (*Lancet*, September 17, 1910) justly contends, the treatment of grave bacterial infections should not be undertaken by those who are ignorant of bacteriology. As he clearly shows, too much importance is frequently attributed to the presence of a particular microbe, when, as a matter of fact, the condition 'may be due to a mixed infection, and this, in his opinion, accounts for the failure of vaccine treatment in many instances. It naturally follows that unless attention is paid to this point the results cannot but be incomplete and discouraging." But more than this expert knowledge of bacteriology is needed, for further along the *Journal* says: "It will thus be seen that the accurate determination of the opsonic power of the blood constitutes one of the most important elements in this method of treatment, and demands no less attention than the detection of the particular micro-organisms concerned in the causation of the disease and the preparation of an efficient vaccine." All of this reads like a preliminary obituary of the *Vaccine Therapy*.

If any one wants to know how to use the therapeutic principle that lies at the bottom of this practice let him read Burnett's little monograph—any of them—for it is on this principle that Burnett built up his great reputation as a curer of disease; but his method was very different from the crude, sometimes hurtful, and always cumbersome (to say nothing of the expense) method of Wright, and those who have gaily followed him, it seems from what is quoted above, without the requisite knowledge.—*The Homœopathic Recorder*, February 15, 1911.

Hunger Sense.

Whether the Hunger Sense has its seat in the stomach, and thirst in the throat, has been the subject of much scientific controversy. The Italian physician Valenti puts the seat of both these emotions in the gullet; he found that a cocaine injection in the œsophagus resulted in immediate suppression of the feeling of both hunger and thirst. Savages have long known that the chewing of coca leaves renders the gullet insensitive and destroys any desire for food or drink.—*The Medical Times*, May, 1911.

Fat Digestion in Infancy.

F. B. Talbot (*Am. Jour. Dis. Children*, March, 1911) finds that large amounts of fat can do a great deal of harm to most babies, such as come under two classes those which have a normal digestion and are unable to digest excessive amount of fat, and those which have diminished powers of digestion and are unable to digest normal amounts of fat. Most (though not all) babies can digest fat within reasonable limits. We may increase the percentage of fat gradually up to 4 per cent. in most normal babies, whose digestive powers have not previously been lowered by crass errors in feeding or by infection. These children develop normally without any of the signs or symptoms of fat indigestion, so long as their hygiene is perfect and they have no intercurrent infection.—*The Medical Times*, May, 1911.

Chronic and Recurrent Headaches.

Williams in the *Charlotte Medical Journal* in discussing neurological advances in the diagnosis and treatment of chronic and recurrent headaches, excludes headache from eye-strain, as he has

nothing new to add. In organic new growths a periodicity occurs, for in cases of headache from cerebral tumors the headache may disappear for weeks at a time. If the new growth cannot be localized intra-aural pressure must be relieved at once to save the eyesight. Repeated lumbar punctures will accomplish this, but it is safer and more effective to remove a flap of cranium from under the temporal muscle. If the headache be purely toxic, psychic perturbations nearly always precede the actual pain, sometimes for days, and by detecting these the physician can forestall the headache in the patient who has a tendency to them constitutionally or from unhygienic environment. The headache must also be differentiated from the induced one of hysteria, and the simulated one of the malingerer or seeker of sympathy, headache being a current conventional lie. Thus no physician should try to dismiss a headache as imaginary, even after determining its pathogenesis; for psychic disorders require treatment; and all headaches are warnings of disease of body or mind, the source of which should be attacked, and not the headache, which is a mere symptom. As the case may be, the therapeutics should be dietetic, surgical, or psychic and, of course, hygienic; pharmacodynamics are rarely the indication.—*The North American Journal of Homœopathy*, July, 1911.

The Recognition of Incipient Tuberculosis.

Faller in the *Lancet-Clinic* believes that when a case of tuberculosis can be diagnosed from physical findings, it has already gone further than it ought. The disease in its earliest stage may be diagnosed from its clinical symptoms. The value of family history should not be underestimated, although its chief importance lies in the fact that the environment of the parent is usually that of the children, and that both have the same sources of infection. The personal history has considerable presumptive value, while the patient's home surroundings and occupation are important features. History of previous diseases, especially pleurisy, is of great importance. Grippe, measles, pneumonias, are to be given serious consideration. Probably the first symptom noted by the patient is languor, a feeling of unwonted laziness, and then of an aching, boring sensation of the limbs. Gradually the boring, aching character develops, most severe in the afternoon when the fever is beginning to manifest itself, until the patient realizes that it is not laziness. This fatigue wears away toward evening to reappear the next day. This symptom becomes less marked

as the disease progresses. Following close upon this symptom and like it a consequence of toxemia, is anorexia. Extreme anorexia is not the rule, but the symptom is marked, and while there may at times be a desire for food, a few mouthfuls will satisfy or cause a feeling of repletion. As a result of the extreme fatigue there is a slight loss of weight very early—not the extreme noticed later but rather a muscular atrophy, located in certain groups of muscles. But though this atrophy or loss of weight may be slight, it is a constant phenomenon. Dyspnea is also an early symptom of great import. It will nearly always be found that the patient will admit that in the performance of even slight exercise, more or less dyspnea is excited. The heart action will always be found to be rapid and the blood tension low, while the blood picture corresponds to anemia. There is no one diagnostic sign of so great importance as temperature, and in no other disease does a slight variation indicate so much. A two hour record should be kept, and a recurrent temperature of 99.30 when the patient is at rest should be considered as fever. The maximum temperature is usually reached about 4 p.m., although the time is variable. While it seldom exceeds 100 degrees and is often less, yet the intensity, persistency and constancy are characteristic. One of the most significant and helpful features of the temperature is the morning hypothermia, the thermometer usually showing at 97 degrees or even less if taken in the early morning before the patient has arisen. The author does not consider the physical signs, because he believes that in a great majority of cases the diagnosis should be made before anatomic changes can be elicited by the usual methods of physical examination. But the above symptoms, even in the absence of cough, and after the other conditions which simulate tuberculosis have been excluded, should be sufficient to warrant a diagnosis of incipient tuberculosis as surely as the diagnosis of typhoid fever in the absence of its classic symptoms.—*The North American Journal of Homoeopathy*, July, 1911.

Quinine and Urea Hydrochloride Anesthesia.

The Long Island Medical Journal, in a review of the advances in surgery during 1910, says that among the newer local anesthetics quinine and urea hydrochloride demand attention because of the numerous favorable reports that have been made. H. F. Graham, who tried it in a limited series of cases, believes that its field of usefulness is limited. Where only a small amount of solution is

necessary, cocaine, eucaine or novocaine is preferable, because they give more prompt and better anesthesia. In excision of the adult tonsils, because of the lessened hemorrhage, in operations around the anus because of the long duration of the anesthesia, and in operations requiring the injection of large quantities of solution, will be found the greatest field of usefulness of this anesthetic. A one-half to two percent solution is used and it may be boiled without deterioration.—*The North American Journal of Homoeopathy*, July, 1911.

A Medical Lexicographer on Greek.

A medical dictionary embodying many new features has been published recently, the author being Dr. Thomas L. Stedman, editor of the *New York Medical Record*. In the preface some wise remarks are made by Dr. Stedman. In referring of the etymology of medical terms, he deplors the elimination of Greek from the curriculum of schools and colleges in the United States, the result of which has been that only a small percentage of even well-educated physicians of the present day can read the Greek characters. In consequence of this, he has deemed it advisable, though under protest, in the case of words derived from Greek sources to give these in Roman letters rather than in Greek. He desires to register his conviction that the elimination of Greek from the schools of the the United States has done much to barbarise the language of medicine and to render necessary special dictionaries of the science. Nevertheless, he holds the opinion that some day the pendulum will swing the other way, and a new renaissance will again join culture to knowledge to make the perfect physician.—*The Lancet*, June 24, 1911.

The Osteology of the Bushmen.

There has been added lately to the Museum of the Royal College of Surgeons of England an extensive collection of skeletons of Bushmen which will prove of great interest to those engaged in the study of the pigmy races of mankind. Along with other specimens added during the last 12 months these skeletons will be on exhibition in the council room of the College on Thursday and Friday, July 6th and 7th, from 10 A.M. to 5 P.M., and on Saturday, the 8th, from 10 A.M. to 1 P.M. This special exhibition is open, as in the Museum itself, to all medical men, and the services of the

museum staff are freely at the disposal of visitors. The outstanding feature of the Bushmen, besides their small size and negroid traits, is the juvenile character of the adult skeletons. The Bushmen are in one sense adult boys. One of them shows a remarkable instance of toleration of injury. The upper teeth have ground the food against the alveolar border of the lower jaw until the inferior dental nerve has been freely exposed on the grinding surface. At the annual exhibition numerous additions to the pathological collection, to the series of malformations, to the series of human anatomy, and especially to prehistoric British races, will be on view.—*The Lancet*, July 1, 1911.

Zinc Ionisation in Lupus Vulgaris.

As our columns show, ionisation, or the introduction of drugs into the system by electricity, is coming much more into vogue and give satisfactory results in many conditions. In *THE LANCET* of April 22nd Dr. J. Curtis Webb reported encouraging result from the treatment of colitis and proctitis by ionisation of a solution of zinc sulphate introduced into the bowel. In a recent number of the *Liverpool Medico-Chirurgical Journal* Dr. G. G. Stopford-Taylor and Dr. R. W. MacKenna have reported good results from the treatment of lupus vulgaris by ionisation of the same salt. Some years ago Dr. Stopford-Taylor ingeniously suggested a plan whereby the electric current might be concentrated on lupus nodules. The horny layer of the epidermis offers considerable resistance to the passage of the current, and if there is any break or abrasion of the epidermis the current tends to concentrate there. Lupus nodules are covered with ill-developed epithelium which is less resistant to the action of liquor potassæ than the surrounding healthy skin. If, therefore, the part to be treated is briskly rubbed over with a pledget of cotton-wool soaked in liquor potassæ the lupus nodules are denuded of their epithelial covering and appear as moist gelatinous masses embedded in the skin. The part is then thoroughly wiped with dry absorbent wool, and two or three layers of lint or a thick pad of cotton-wool, soaked in a 2 per cent. solution of zinc chloride or a 10 per cent. solution of zinc sulphate, are applied. The pad should exactly cover the part. Over this is placed a zinc electrode, which is firmly pressed on and is attached to the positive pole of a battery. The indifferent electrode is a pad soaked in a solution of sodium or ammonium chloride, and is applied to some distant part of the body and connected with the negative pole. The

current is obtained from the ordinary galvanic battery of 12 or 24 cells, from accumulators, or from the mains through a switch-board. If the current is obtained from an ordinary galvanic battery or accumulator, a rheostat to graduate the intensity of the current, and a milliamp-reometer to measure it, are required. The current is switched on gradually, as any sudden alteration in strength is likely to cause painful shock. The intensity to be aimed at is from 2 to 3 milliamperes for each square centimetre of surface, which most patients can bear. The duration of the sitting should be from 10 to 20 minutes, but may be less if the patient cannot bear so much. The current should be switched off gradually. On removing the pad every lupus nodule is found converted into a dry glazed whitish plug. Where the skin is not broken there is no evidence of the passage of the current. After removing the electrode a burning sensation is felt, and after an hour or two there are considerable swelling and redness of and around the part treated. From the surface denuded of epithelium serum slowly exudes and dries into a crust, which should not be disturbed. All that is necessary is to apply a calamine or lead lotion. In about a fortnight the crust falls and considerable improvement is seen. Some of the nodules have completely disappeared, others are smaller, and all are more or less superficial. The treatment should be repeated every fortnight until the disease has completely disappeared. The ultimate result is a smooth, pliable, and elastic scar. The curative effect is due to several factors: (1) Zinc ions are powerful germicides; (2) they have strong coagulating drying properties; (3) as a result of the oedema produced by the current, which may last for several days, serum laden with opsonins and phagocytes comes into contact with tubercle bacilli in the nodules. For lupus vulgaris, in which the nodules are discrete, Dr. Stopford-Taylor and Dr. MacKenna have found the treatment superior to any other in speed, efficacy and scar. They obtained remarkable successes in extensive lupus which had been treated by X rays, Finsen light, or other methods with great improvement, but had persisted in the form of a few scattered nodules. Such nodules may at any time become foci of fresh extension and are best treated by zinc ionisation. The treatment may also be applied with great advantage to lupus of the mucus membrane of the lip or nose.—*The Lancet*, July 1, 1911.

A Natural Hair Restorer.

It is reported that Sir Ernest Shackleton recommends extreme cold as one of the best means of strengthening the hair. Almost all that went with him on his Antarctic expedition found that their hair grew thicker and stronger as they approached the Pole. It was also found that bald-headed men were almost never found among those who worked for a cold-storage company, where the men work all day in a temperature of 20 degrees of frost, and the cold seemed to make the hair thicker.—*The North American Journal of Homœopathy*, June, 1911.

Campaign to Supply Milk for Babies.

The Committee on Infant Mortality, of which Dr. Godfrey R. Pisek is chairman, started its campaign to raise \$300,000 for the yearly maintenance of sixty milk stations throughout the Borough of Manhattan. At the regular meeting held at the Plaza Hotel it was announced that the city budget for 1911 contains an appropriation of \$40,000 for the support of milk stations. Dr. Abraham Jacobi argued that more could be done to lessen infant mortality by sending nurses into the home to explain to mothers than by lengthy lectures from eminent doctors.—*The North American Journal of Homœopathy*, June, 1911.

To Kill Flies.

The Southern California Practitioner states, among its therapeutic Hints, that while sticky fly-paper, traps and liquid poisons are among the valuable things to be used, the latest, cheapest and best is a solution of formalin or formaldehyde in water. A spoonful of this liquid put into a quarter of a pint of water and exposed in a room will be enough to kill all the flies. Another cheap and reliable poison which is not dangerous to human life, is bichromate of potash in solution. One dram is dissolved in two ounces of water and a little sugar added, and the solution placed in shallow dishes about the house. But perhaps the simplest plan of all is to heat a shovel or similar article and drop on it 20 drops of phenol. The vapor kills the flies. A room may be quickly cleared of flies by burning pyrethrum powder in it. The vapor stupefies the insects and they may then be swept up and burned.—*The North American Journal of Homœopathy*, June, 1911. •

Gleanings from Contemporary Literature.

A SERIES OF ONE HUNDRED CONSECUTIVE CASES OF ABDOMINAL HYSTERECTOMY FOR FIBROIDS, WITH TWO DEATHS.

BY EDWIN A. NEATBY, M.D.,

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The history of hysterectomy for uterine fibroids is strangely like that of ovariectomy for ovarian cysts.

Since 1809, when young Ephraim McDowell did his first ovariectomy in the backwoods of Kentucky, much has happened. In those early days ovarian tumours attained enormous proportions, so that the small emaciated body of the patient seemed to be but an appendage to a huge unwieldy tumour. Such ovarian tumours are now practically never seen.

Less than twenty years ago uterine fibroids, of which almost similar language might be used, were not infrequently met with, and they were even more difficult to deal with. Their weight reached 80 lbs. or more. The largest tumour I have ever seen was in a patient under my own care at the London Homœopathic Hospital in 1897, a short, square-built woman, whose abdomen measured 50 in. in girth, and contained a tumour so large that it was by mechanical pressure squeezing all power of functioning from heart, lungs, and kidneys, and was causing serum to exude everywhere below the waist in big bullæ under the epidermis. She died, and any attempt at surgical interference, had it been made, would only have accelerated her death. It was an enormous retro-peritoneal fibroid, whose dimensions had been rapidly increased by general cystic degeneration. The solid part of the tumour weighed over 27 lbs.; the fluid from the cyst measured 12 pints.

The next largest was a more solid tumour, also retroperitoneal, if my memory serves me rightly which was owned by a patient of Dr. Burford's at a still earlier date. With heroic courage Dr. Burford tackled this gigantic mass, and removed it.

Operators still meet tough cases, but for bulk these instances are now-a-days seldom matched. As in the case of ovarian cysts, early surgical interference prevents such ungainly developments.

We do not know who performed the first hysterectomy but it was probably done in error for an ovarian, and its pedicle was fixed in the abdominal wall, as was that of ovarian cysts in the early days of ovariectomy. For the latter the clamp was abandoned about the year 1878-1880; for the former it was in general use until about 1896, and was clung to by some successful surgeons much longer.

The first instance of the adoption of the intra-, retro-, or sub-peritoneal method of treating the pedicle in London was by Dr. Heywood Smith

in the year 1892. It was first performed in the London Homœopathic Hospital on a patient of my own in the year 1896. A very favourable case of a small pedicle presented itself and the opportunity was thus thrust upon me to accept the new method. So long as the extra-peritoneal method prevailed, the mortality remained high, while to-day for both operations it is being reduced almost to a vanishing point.

My interest in uterine fibroids was first aroused by my teacher and colleague, Dr. Burford, who suggested that I should make a special study of these growths. Like a living germ, that interest has grown and developed. I cannot think the enthusiasm I have been able to bring to bear upon the subject ill-placed when I bear in mind the large proportion of women whose lives are rendered miserable by these growths, and when I remember that as to their etiology we are still in the dark. Of the intimate pathological processes lying behind their growth and degeneration there are many problems unsolved. From the clinical point of view, however, and as regards saving life and preserving health for those women who confide themselves to our care, we are to-day in a better position than ever before. It is on this clinical side that I wish to bring some facts to your notice.

I have so often spoken or written on this subject that I fear lest I should weary you. For this reason I am reading only portions of my paper, which can appear in its entirety elsewhere, and be available for reference in the event of anyone desiring to pursue the subject.

At the outset I freely acknowledge that I am a supporter of early operation for fibroids. Some years of careful attention to the subject, a fairly intimate acquaintance with its literature, and a careful study of the history of myomatous patients, both before and especially after operation, have led me gradually but surely to that position. If the facts and observations I have the pleasure to submit to you in any degree influence your judgment in the same direction, my object in presenting this paper will have been attained.

The place of any operation in the treatment of a diseased condition depends upon a variety of circumstances and considerations. Among these the following are the most important :—

- (1) The natural history of the disease.
- (2) The features of the individual case.
- (3) The efficacy of other treatment.
- (4) The results, immediate and remote, of the particular operation.

It is with the fourth consideration—the results of operation—that this contribution to the subject is concerned, but I should like in passing to insist on the prime importance of skilful anæsthetization. A good anæsthetist is a great asset—one who has an eye to see the need for a change of anæsthetic, and who gives the surgeon no anxiety. Among our own ranks Dr. Powell, Dr. Grantham Hill, Dr. Vincent Green, and Dr. Austin Reynolds are such, and to them all I take the opportunity.

of expressing my indebtedness for invaluable and indispensable help unstintingly and patiently rendered.

This factor (the results of operation) might be stated in a few words, but as it is intended to supply in this paper some recent facts these will be brought forward before the conclusion is advanced. What then are the results—immediate and remote—of hysterectomy? It is now-a-days comparatively easy to state general mortality of this operation. Before referring to published figures I shall mention some particulars of my own series as being of more immediate interest to myself. Taking a consecutive series of one hundred abdominal hysterectomies I have had two deaths. The first of these was unexplained. The lady was a patient of the late Dr. Dyce Brown's, aged 49 (Case 12). She was extremely anæmic, with a low-tensioned pulse, and had long had persistent menorrhagia. The operation was tedious; the patient took the anæsthetic badly. After doing very well until the fourth day she was seized quite suddenly with severe pain in the left side of the abdomen, followed quickly by rapid pulse, collapse, and death. No *post mortem* was obtainable. The second fatal case was in a married woman, aged 39. She had had menorrhagia, anæmia and anæmic bruits. A fibroid was found in the posterior wall. Immediately after operation bronchitis set in. Various medicines were used, but she became exhausted, and died a fortnight after operation from sudden heart failure while straining at stool. There was no sign of abdominal disturbance, the pulse occasionally reached 120, but was only 100 on the day of her death. With respect to these two deaths they serve to spoil a good record, but certainly do not form even the beginning of an argument against hysterectomy. I entertain no doubt that had those patients been operated on some considerable time earlier they might have recovered. They form therefore an item in the mass of evidence in favour of early operation.

Should the question be asked, "Is this low mortality exceptional?", my answer would be "no." Prior to this series my own death-rate was decidedly higher, but it included cases, mostly already published, done by the old extra-peritoneal method, and the early example of the new operation. At that stage of transition all operators lacked experience in the newer method, and the details of asepsis were not yet perfected.

In the year 1896 the representative mortality was over 22 per cent.; ten years later the average of nine hospitals was 3·1 per cent. in 348 cases. These figures were collected by Bland-Sutton and Giles. Dr. Giles has published a series of 320 hysterectomies for fibroids and fibrosis, with a mortality of 4·3 per cent. This list is probably unfair to himself and his present-day death-rate, for it includes cases done some years ago. Since that the general mortality has probably improved, and Bland-Sutton has published an account of 100 cases without a death. Similar results cannot always be repeated, but it was very closely approximated in the Johns Hopkins Hospital, where Kelly and Cullen had a mortality of only just over 1 per cent. in nearly 200 cases—two deaths in one

hundred and ninety-two.* The latest English writer on the subject says the mortality should not exceed one per cent. I could have presented to you a list of seventy consecutive cases without a death, but it appeared fairer to give the more extended series.

I am reminded here of the anaesthetist who announced a series of 2,500 patients with one death, which was immediately capped by another with 5,000 with no deaths. As a punishment this poor man promptly had two deaths, making his list descend to the average line. So, gentlemen, I would "touch wood" while announcing my own results. It is scarcely to be expected that any operation will have an indefinite record of no deaths, for man is mortal. Against some of the pitfalls it is impossible wholly to provide—such as anaesthetic accidents, pulmonary thrombosis, certain renal complications, or the rupture of a pelvic abscess during operation. Many cases we do not see until we are obliged to accept risks or decline to stretch out a helping hand to our needy neighbour. I have always held it to be a duty to give a patient a chance, even a remote one, rather than to consider one's mortality record.

The ground is now cleared for taking up the consideration of the remote results of the operation. In order to justify its performance a low mortality must be accompanied by restoration to a reasonable degree of health, or failing that, by arrest of steadily downward progress. In the event of an unfavourable remote issue an explanation of its nature and cause must be sought. My own series shows that I have been able to ascertain the after history of seventy-three out of the hundred. Of those in whom a report has been obtained three have subsequently died. In one of these the result was unexpected. Dr. Greig, under whose care the patient was, informed me that a large infiltrating mass rapidly appeared in the pelvis, and she died within eighteen months. At the time of operation the microscope showed no evidence of sarcoma in the parts examined; no *post mortem* was made. In this case of supposed sarcoma, the patient, a single woman, aged 50, had had a large multinodular tumour, which had produced retention. It was impacted in the pelvis and had pushed the bladder and uterus up into the abdomen. The uterus was studded with fibroids of various sizes. The sequel proves that the tumour (Case 49) was probably sarcoma from the first, and that the stump was infected at the time of operation.

In the other two cases recurrence was not surprising. One of the patients (Case 29) was a single woman, aged 66, who had had a growth many years, and had reached the menopause at the age of 51. She had carefully husbanded her tumour, and after rejoicing in its "quiescence" for those fifteen years, was disturbed to find that hæmorrhage and foul discharge came on. They had been present for a year when she first saw me. This "benign" growth had kept her more or less invalided for years, had prolonged the menses until she was 51, had caused her heart to be hypertrophied and dilated. It had then become quiescent and lulled her into a sense of false security, from which she was rudely

awakened. At the operation it was found to consist of many pedunculated subserous growths, and a mass filling Douglas' pouch, and pushing up the uterus into the abdomen. Some of the masses were calcifying, and one was undergoing cancerous degeneration. Pau-hysterectomy was carefully performed, but a year later a distinct recurrence had taken place. She was afterwards lost sight of, but I have little doubt that she went into some workhouse infirmary and died there.

In the third case (40), the period had been excessive until 54 years of age, her last child was born twenty years previously. She had had recurrent hæmorrhages for four or five months; there was a tumour projecting from the pelvis of which the patient was unaware, the cervix was infiltrated and hard; the mobility of the uterus was lessened. Pau-hysterectomy was performed, from which the patient recovered well, but six months later, bladder symptoms set in, due to recurrence, and she died of exhaustion after about another year.

While dealing with malignant changes occurring in myomatous uteri, I must refer to one or two more cases of the kind. K.C. (93) was a married woman, aged 58, without family; menstruation ceased at 54: she said that three years ago "something seemed to break," and a discharge of "blood and slime" occurred lasting for a week, and then ceasing. For the last ten weeks there had been offensive leucorrhœa. A much enlarged uterus was found, with a lump projecting into Douglas' pouch. The uterus was explored, but although the cavity appeared to be scraped clean the odour did not cease. The sound passed about 2½ in., but not nearly to the summit of the swelling. It was decided to remove the uterus at an early date; this was done by pau-hysterectomy. During the operation the upper pole of the tumour was seized with a vulsellum, whereupon it ruptured, and the sponges and adjacent skin, &c., were covered with *thick*, dark green, foul-smelling pus. On examining the specimen a fibroid was found in the posterior wall, shutting off the upper part of the uterine cavity, which had become distended with pus. The wall was thin and softened, although very tense and hard prior to rupture. The cavity was lined with a columnar-celled carcinoma.

My interpretation of this sequence of events is that for three years the patient had had pyo-metra from obstruction of the cavity by the fibroid; that the irritation of the growth and the pus had induced cancerous changes which were of comparatively recent date. The general health had not suffered enough to warrant the supposition that the carcinoma had existed so long. Here again the growth had deferred the menopause for seven or eight years, and had caused pyo-metra, and probably cancer.

Case 92, J. S., is another instance of associated fibroid and cancer, the fibroid being of a more ancient date than the cancer. The former consisted of a cervical mass the size of a golf-ball, occupying the anterior lip of the cervix and projecting into the vagina, while small nodules were

felt in the body. Some suspicious nodules were felt on the vaginal wall close to the posterior lip. Pan-hysterectomy and excision of the upper part of vagina were performed. On opening the uterus it was found to be very extensively affected with carcinoma of the endometrium.

Owing to the destruction of our laboratory at the London Hospital, some of the specimens I should like to have shown, as well as the microscopic sections, have perished.

Case 73, sent to me by Dr. Ord, proved to be a fibroid situated at the right uterine cornu, which had undergone carcinomatous changes. It was so extensively involved—the whole nodule seeming to be infiltrated—that I conclude it was originally a case of adeno-myoma. The patient was a single woman, aged 66, she had complained of irregular hæmorrhage for two and three quarters years, with sharp pain in right iliac region, extending to the groin and down the leg. Dr. Ord has kindly informed me that she is doing well, and is free from recurrence so far. •

Of Case 45 I have been unable to secure any subsequent history.

E. W., aged 52 (Case 31) was married twenty-nine years, without children, suffered from fibroids and commencing malignant disease. Latterly she had irregular and excessive menstruation with foul discharge; also pelvic pain, loss of flesh, and anæmia. Pan-hysterectomy was performed in 1907, from which she made a good recovery. This year the local medical man reports, "No further symptoms of uterine trouble; gained in strength and weight; now has a slight hemiplegia on the left side probably due to alcoholism."

There have thus been eight cases complicated by malignant disease, out of my 100 hysterectomies for fibroids. Of these, seven were carcinoma. This is a large proportion and tends to support the belief, not in itself unreasonable, that the presence of myomata predisposes to cancer. This is too large a question to go into here, but the most experienced observers and operators lean towards the view that such is the case, and some accept it as proven.

The most unsatisfactory cases after those for *malignant changes* in fibroids are those where a considerable degree of neurasthenia is present. In such it is desirable to warn the patient that while the main feature which prevents recovery is removed the climb back to the uplands of health will be long and tedious. The operation will not cure the neurasthenia, but it will permit of its being cured.

Accordingly two of my patients have made slow progress. One of these was a single lady of culture and refinement, whose life had been rendered miserable by dysmenorrhœa and menorrhagia. The uterus was the subject of a number of interstitial fibroids, and a submucous fibrous polypus, and was more or less fixed in a position of retroflexion by strong adhesions. Life was at once rendered comfortable by the absence of pain and bleeding coincident with the arrest of menstruation by the hysterectomy. This was more than two years ago, although great improvement has taken place, the bodily and mental vigour had not yet.

been fully restored when I last heard. The other case operated upon in the Homœopathic Hospital was a spinster, aged 46. She was never so bad as the foregoing, and was the subject of coccy-godynia; here the general improvement is also slow. I learn that she is now in good health.

To the list of unsatisfactory cases must be added that of F., aged 39, whose strength was reduced by menorrhagia and intermenstrual white and brown discharge. This had been going on for fifteen years. The patient had had seven children, but none for ten years. No proper note was taken of her heart, but it was said to be "weak," and she suffered from anæmia and cough. Nine months after operation she suffered from "heart attacks," which kept her awake at night; this, unfortunately, is the last we heard of her.

This is the end of the decidedly unfavourable remote after-results. They comprise three deaths from malignant disease, occurring within two years of the operation, as far as my memory serves me (Cases 40, 49 and 29). In two of these the result was feared, because the condition was recognized, and the recurrence (probably sarcoma) was therefore unexpected.

On recalling to my mind the details of the history of these cases, three fatal, seven unsatisfactory, and two indifferent ones, the point which impresses me most forcibly is that the results might have been far different had the operation been performed earlier—one of the two fatal cases might have been saved—one might almost say would have been. In view of one of the cases recorded here having no recurrence for three and a half years, of others of five years and longer date, not included in this series, I am of opinion that the result of operation for fibroids with cancer is decidedly favourable, and all those who died of recurrence would have had a good chance of being alive now if operated upon at an early date of their malady.

It is equally true of the neurasthenic and cardiac cases that early operation would have given much more favourable results.

There remain three classes of cases to which I wish to direct your attention quite briefly. Those with a marked degree of anæmia come first; there are twelve mentioned, but I think the notes are incomplete on this point. Taking the twelve, six, after intervals varying from nine months to three years, had not yet recovered robust health. Two years later one of the six seemed to be quite well again. Of the twelve five were recorded as being severely anæmic; respecting two of these it is too early to draw any conclusion as to their final degree of recovery. Three others when last heard about had made a good permanent recovery, and one who had cancer had recovered her general health, but was recently the subject of a "slight hemiplegia"; her case has been reported earlier.

I am afraid we have not always kept a record of the hæmoglobin of these patients. It is stated by German authorities that it is unsafe to operate unless the hæmoglobin is over 30 per cent., and Blair Bell said it should be 40 per cent. I cannot accept the hæmoglobin percentage as a

guide, for I have operated successfully with only 25 per cent. I do admit, however, that very anæmic patients have less resistance against sepsis than others. Two of the very severe cases, where breathlessness was quite incapacitating, had percentages of about 60 per cent., which rose, after taking iron, to 70 and 73 per cent. In Case 38, sent to me by Dr. Epps, the hæmoglobin rose from 45 to 80 per cent., from April to June, while the patient was taking iron. She had a large submucous fibroid occupying the uterine cavity.

Case 32, another of the severely anæmic patients, had 40 per cent. of hæmoglobin. She was very pale for many years, and is among the imperfect recoveries.

Case 50 had 45 per cent. of hæmoglobin.

Anæmia due to hæmorrhage is rapidly benefited in most cases by protoxalate of iron, though this does not check the bleeding. More important than the percentage of hæmoglobin is the duration of anaemia and the size of the tumor. Long standing anaemia and a large tumor both tend to induce brown degeneration of the cardiac muscle. This is more serious than low hæmoglobin, which is rapidly repaired up to a certain degree, especially in women, provided the hæmorrhage be arrested. The second class of cases to which I just referred was those in whom I have called the results medium. Of these there are fourteen. Such expressions as the following describe these patients, the language is their own: "Fairly well"; "certainly better"; "fairly well and at work"; "gets about well but is very stout"; "going on satisfactorily, backache"; "much less anaemic, able to do her work"; "gaining strength." One patient remained well and rosy, but had a large lump filling the broad ligament, which was feared to be sarcoma, but is slowly disappearing. It was probably a late hæmatoma.

Thirdly come those classed as complete recoveries, where the patient was restored to full health; these number 37. The language used by these patients to describe the results of the operation is on this wise: "Wonderful success, now at work in India"; "quite comfortable"; "very well, indeed"; "excellent, stout but active"; "very much stronger, can walk longer distance than for years"; "very well, strong as ever, never any pain"; "best of health since operation"; "well"; "nicely"; "well so far" (in recent case); "very well, no bladder difficulty"; "better than ever been."

The remainder of the hundred cases are either too recent to enrol or are untraceable.

One other point before I close bears on results. Patients and their husbands often ask what effect the operation will have on their sexual relations. Theorising cannot settle a question of this kind. In a number of cases I have instituted inquiries, and though I have not compiled the answers, the results may be stated as follows: Where dyspareunia, or lack of sexual instinct, were due to other causes, the operation has effected no change. One patient, aged 51, stated that desire and reciproc-

city were lessened; most of them have stated that their feelings were either natural or as before operation; one patient inquired what was the nature of her operation, for after being in abeyance for twelve years, desire and response had returned to normal.

Dr. Giles makes a valuable contribution to the subject, based on sixty-four cases. One patient stated that she had never experienced desire, and since operation had lost sexual feeling; four patients said that desire was less and feeling unaltered; one said her feelings were "less natural, except at times"; seven others said that feeling and desire were lessened; forty-six said that they were unaltered; and five that they were increased. There is, therefore, no justification in the charge sometimes made against this operation that the patient is "unsexed" by it. It is true that she cannot bear children after it, but it is also true that in many instances she is already sterile from the disease.

An analysis* of this series to ascertain what were the leading clinical features is not without significance. In a large majority of instances pain was present—viz., in sixty-eight out of the hundred; but in only ten cases was pain the sole symptom complained of, and of these only two had large tumours. In twenty-one cases pain was associated with haemorrhage, and in twenty-two others with both haemorrhage and pressure symptoms, chiefly vesical. Haemorrhage is of practically equal frequency, being present in sixty-four out of ninety-five cases, where information was recorded. In ninety-three out of the ninety-five, either pain, haemorrhage, pressure alone, or in combination, were present, leaving only two where the patients did not complain of anything, or only of general fulness from the size and weight of the growth.

Where pain was the only subjective symptom, whether the tumour was small or large, all the patients save one, of whom I have reports, showed excellent remote results, whereas when bleeding was the sole symptom the record was far different. Both the patients who died suffered in this way, as also sixteen out of twenty of those who made a medium remote recovery.

Although, as I have said before, women seem to stand haemorrhage from the genital organs in a remarkable manner, the evidence of these cases indicates that any really decided excess existing for a prolonged period seriously lessens their resisting power. They recover less perfectly from operation than do other patients, and I believe I may add, from ordinary illnesses also. Even apart from the large and important subject of degenerations, which I have not time to dwell upon here, I think it is demonstrated by the widest experience—which my own confirms—that uterine myomata are not such innocuous growths as has been believed. In making this statement I do not forget that there are a very few striking exceptions.

To this I would add that both as regards immediate results, remote results, and the obviation of invalidism and tumour degeneration, early operation is not only justifiable, but is called for in a large proportion of

the cases. What that proportion is I am not at present able to state from authentic data.

It has been suggested that I should say a few words which may help towards a decision as to whether a case requires operation or not.

Some general principles have already been suggested—such as the desirability of early operation. This is based on the cases under review. If I give further indications for operation they will be based on considerations outside this paper. Another generalisation may be safely given—a fairly sweeping one—all cases should be operated upon if the symptoms they are inducing do not yield to treatment in a short time. All cases should be operated upon where the symptoms present are the mechanical or secondary effect of the growth.

In more detail the indications may be stated as follows: All cases should be operated upon (a) where metrorrhagia exists, and (b) where menorrhagia has existed for a prolonged period, and (c) where even a single serious “flooding” has occurred, and of these the second is a most important indication, though the first and last may also present a certain amount of urgency. All cases should be operated upon where hypertrophy or dilatation of the heart exists—unless, indeed, the cardiac condition be too serious. Wherever a tumour is with difficulty moveable in the pelvis it should be excised. Mere bulk may necessitate operation. Growing tumours in young women should be removed by myomectomy if the case is suitable. All calcified and otherwise degenerated tumours should be removed. Tumours reaching to the level of the umbilicus should usually be removed.

Cases where there are no symptoms whatever, and heart and kidneys are sound, and the tumour is freely moveable in the pelvis, may be safely watched. Cases with only trifling symptoms which are at or near the usual age of the menopause may be watched. Small growths, not larger than a tennis ball, unless occurring at the cornu, should be left if not producing definite symptoms.

I do not think that it is any reproach to the medical side of our healing art that operation should be called for. Our acquaintance with the inestimable advantages of homœotherapeutics enables us to deal with many forms of disease by medicines, which, without such knowledge, would be less completely cured by surgery. The possession of our valuable guiding rule does not blind us, any more than it did its great discoverer, to the fact that some cases at the stage in which we first see them are outside the sphere of drug treatment. Hahnemann ungrudgingly recognized the limitations of medicinal therapeutics when he wrote that the selected remedy proves curative where the disease does “not manifestly depend on a considerable deterioration of an important viscus,” (*Organon* 279.) Again he countenances surgical treatment in the statement that “every intelligent physician would first remove” the “manifest exciting or maintaining cause where it exists,” “the indication thereupon generally ceases spontaneously.” “He will . . . extract .

from the cornea the foreign body that excites inflammation of the eye ; . . . lay bare and put a ligature on the wounded artery, . . . crush the vesical calculus ; open the imperforate anus of the new-born infant," &c. I am persuaded that Hahnemann, living to-day, would rank many of the symptoms of uterine fibroids with those due to stone in the bladder, and of both say *tolle causam*. (*Organon* S. 7 and Note 2.).—*The British Homœopathic Journal*, May, 1911.

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SOCIAL HYGIENE.

ORREN B. SANDERS, M. D.

Boston, Mass.

Social hygiene will be rightly and readily defined as that branch of science relating to the preservation and improvement of society. It is not, then, the term "social hygiene" that is likely to be misinterpreted, but rather the word society, which too often is understood in what is altogether its secondary meaning, viz., a number of persons connected by acquaintance, friendship, circumstances or common interest. Such constitute, in the limited sense, but quite common usage, society. And even when we go further afield, eliminating to a degree the personal element which thinks first of the society it frequents, then of society as represented by the wealthy, the frivolous, the cultured, the intellectual classes, there yet often remains a subtle distinction which while vaguely applying society so inclusively as to write it with a capital S, yet somehow falls so far short as to omit certain elements which would not be overlooked if the term Public, with a capital p, were substituted. Yet before we go any further, it is desirable to emphasize the fact that primarily, fundamentally, and inescapably, society is the public; that it is essentially not only the collective body of persons composing a community, but also the collective communities forming the state and the nation. Such a comprehen-

sive viewpoint is essential to any adequate understanding of the sphere of thought and action which social hygiene must occupy ; it touches all sorts and conditions of men ; it passes of necessity over the threshold of rich and poor the educated and uneducated, the responsible and the irresponsible.

All civilized nations share in common two ambitions : the thirst for power, the desire for perpetuation. If this is not true why are great armies and navies called into existence, new territory coveted, new commercial relations sought, money and political aggrandizement made the goal of their endeavour ? If this is not so, why is the question of the fluctuation in the birth-rate, and more especially the death-rate, regarded as so momentous, and the census returns of population so eagerly consulted ?

Without deprecating in our own country, for example, these two national ambitions—which could not persist as they do from generation to generation did they not pre-exist in the will of the majority of the people—it will be pertinent to our subject to determine if there may not be some alarming defects in our present efforts to assure national power and perpetuation, defects which only radically improved social hygienic measures can remedy.

The farmer who should spend a large part of his income assiduously nursing and preserving the most sickly plants, leaving the comparatively healthy ones to the inroads of blight and to insects, except the more obvious enemies, would be classed as the most imbecile or wasteful of agriculturalists. The most ignorant and unintelligent farmer who should go into his fields and garden, and proceed to get rid of the weeds by cutting off the tops, we should promptly pronounce feeble-minded or insane. But what should we say of the farmer who, for a consideration, or blinded by overweening confidence in his ability to raise a crop and make money whether or not there were first multiplying weeds and insects, would so disregard his duty to his dependents and his fellow men, as to allow some mischief-worker to scatter abroad the seeds of harmful plants, the larvæ of noxious pests ?

I am inclined to think that in any of these suppositions cases, the members of that man's family would be upheld in calling him to account for such extraordinary and detrimental actions.

While these are simple, homely propositions, they seem to you equally unlikely and preposterous. But they are not, if you will take our country, commonwealth or city as the field and garden: our national, state or municipal government as the farmer.

We are spending to-day as a nation, millions of the hard-earned dollars of the people, in the care of the insane, the feeble-minded, the epileptic, the pauper, and especially the criminal classes. The insane and the feeble-minded are increasing steadily in numbers, not only because there are more cases developing yearly, but also because we spend so much money and skill in caring for them that their lives—which are but a burden to themselves and others—are appreciably prolonged. We therefore have in our institutions for the insane and feeble-minded, thousands of accumulated cases which will never improve. Only one in every eight or ten cases of insanity recovers, so that the increase becomes very great above the number discharged by death or by restoration to normal life.

The statement was made in 1908, that at that time there were in the United States "more than two hundred thousand insane, three hundred thousand feeble-minded, one hundred and fifty thousand epileptics, and an equal number of criminals." "If to these," says the same writer, "be added the neurotic, semi-insane, and the semi-responsible, it will be seen that the representatives of the degenerate class constitute a formidable portion of the population."

The blind, the crippled, the deaf and dumb, the syphilitic, the enormous proportion of the population brought into the world with the so-called "delicate constitution," which offers no great resistance to the earlier or later development of such diseases as tuberculosis and cancer—how shall we number this host that, with those already mentioned, threatens the physical and mental integrity of the American people.

The government which we have established, is not an extremist to the point of caring for and prolonging the lives of the diseased without endeavouring to defend the comparatively healthy from some of the most obvious foes to health. For example, we have quarantine laws which prevent the introduction of cholera, plague, smallpox, and other contagious diseases; inspection of immigrants which—imperfectly it is true—keeps out the diseased and defective aliens. There are laws regulating the transportation of those afflicted with contagious diseases. There are laws to prevent food adulteration. Medical inspection of school children is rapidly being extended, as well as the enactment and enforcement of those legal provisions which tend to secure better industrial hygiene and public sanitation.

Yet the government as a farmer in its field of humanity, is in all these directions largely ignoring the most subtle and powerful enemies, increasingly active in causing national, physical, mental and moral degeneration. The preservation of society, to say nothing of its elevation even physically to a higher level, can not be assured until war is scientifically and unceasingly waged upon diseases and conditions heretofore disastrously let alone, or equally disastrously relegated to the sphere of the criminologist or, to a very limited extent, to the clergy.

These diseases are the venereal diseases: these conditions are, in part, those that actually put a premium on their distribution. The attitude taken, the relation assumed, the part played by society largely determine these conditions, and I will extend the term to include those conditions which encourage the rapid increase in the production of the highly nervous or neurotic temperament. This temperament is often followed in succeeding generations by defective mentality, epilepsy, or insanity.

These premises bring us to the foolish farmer who would get rid of weeds by cutting off the tops. For instance, society admits only behind closed doors the existence of venereal diseases, at the same time that 70 per cent. of diseases of women that come to the surgeon's table are caused by venereal infection. We, society, the great public, our representatives constituting the

government provide liberally for the blind, but by our apathy encourage the distribution of the specific poison which causes one-fourth to one-third of these afflicted ones. We, society, constantly and clamorously deplore the diminished birth-rate, while we insanely encourage it by electing that the dower of our youths and maidens as they approach maturity, shall be ignorance of physical and economic conditions upon which that lowered birth-rate, and much of existing domestic unhappiness depends.

When as a nation or community we reap our harvest of weeds after having valiantly cut off the tops, we feel deeply injured, and show our christian spirit by cutting off a few more tops, in other words, building a few more institutions for the physical and mental degenerates we are morally responsible for.

Again how we are the farmer who allows the mischief-worker to scatter abroad the seeds of harmful plants, the larvæ of noxious pests, will be shown.

Herbert Spencer said: "To be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition to national prosperity." We may interpret this to mean that a healthy body is the most enviable capital an individual or a nation can have. Moralists can take no exception to this: the "body" is a term which properly includes all its organs and functions, stomach no less than brain, and vice versa; ideation no less than digestion.

The healthy body is an impossibility for the immoral man. The brain registers upon its normal as on its abnormal cells, all thoughts and deeds: they leave an ineffaceable mark, they cast a vote, as it were, on the side of health or disease. On the other hand, the illnourished, poisoned brain obviously can not functionate with the freedom and accuracy of a brain in normal condition. No part of the human organism functionates independently of the other parts. We must have health of all the interdependent parts if we would have the maximum of individual or national power, power to create and perpetuate the life not the

death of society. It is here that social hygiene steps in, or should step in as a tremendous force.

Tuberculosis is a disease that, not only by its prevalence and contagiousness, but chiefly in the beginning by its high death-rate aroused the whole civilized world to a united effort to cure the consumptive and to prevent the alarming and rapid increase of cases. The National Association for the Study and Prevention of Tuberculosis states that \$8,180,621.50 was spent by various agencies in the United States during 1909 in the crusade against tuberculosis. Upwards of ten million pieces of literature were distributed. More than 60,000 patients were given free treatment and advice at dispensaries : nearly 40,000 were cared for in sanatoria and hospitals, and this sanitarium and hospital care cost about five and a quarter millions of dollars. This crusade has been going on with great activity during the last twenty years. The death-rate from consumption for the registration area of the United States, decreased from 245.4 per 100,000 of population in 1890 to 187.3 in 1900. This is according to the report of the twelfth census. From later sources there is reported a further decrease from 1900 to 1907 of 21.6 per cent. in deaths from tuberculosis.

Let it be remembered that the death-rate is more truly indicative of the status of tuberculosis than it would be in the case of nervous diseases, for instance, since tuberculosis as we know proceeds in the great majority of cases directly towards dissolution.

Now tuberculosis has proved one of the most obvious foes in the human field to the vitality and persistence of the human plant. We have bestirred ourselves to eradicate it, but meanwhile other foes flourish unchecked. I will not speak of cancer, for already the alarm has been taken ; or of pneumonia, or typhoid fever, both markedly on the increase, and both believed to be germ diseases. Not one of all these diseases, however, not excluding tuberculosis, is a greater peril to the integrity of this nation than the venereal diseases which, largely hidden from sight, and all the more dangerous for that, do not make a conspicuous showing in mortality statistics.

The time has come when nations must abandon their concentration of effort to lower the death-rate. They must concentrate upon the conservation of health and the prevention of destructive agencies. The preservation of the unfit, the diseased, will come to be considered as of minor importance compared with the prevention of the production of the unfit.

There would seem to be no country in the world where men and women meet on such a sane ground of equality of interest and endeavour in the discussion of matters of public welfare, as in America. This sanity of viewpoint, if there are to be effective social hygienic policies inaugurated and conducted to successful ends, must be extended to embrace the discussion of venereal diseases. We must be matter-of-fact-coworkers devoid of self-consciousness. This secrecy, hesitancy, embarrassment, must yield to the coercive necessity which, in any event, hard facts impose upon us ; a necessity which makes frankness and co-operation in the work of the prevention of these diseases only a matter of time. Time, however, is of great importance. My own experience in this class of cases, and especially in the treatment of gonorrhea, leads me to largely endorse the recently ascertained opinion of other specialists in Boston and elsewhere, that from 80 to 90 per cent. of men have or have had gonorrhea. This is the estimate that is made for the male population of cities all over the country. This disease does not decrease ; it increases. It is easily communicable not only by personal contact, but also by infected articles such as towels, sheets, drinking cups, etc. It is not easily curable, popular opinion to the contrary notwithstanding, as the germs in the system may lie dormant months or years, to later become actively virulent. It is productive of sterility in both men and women and occasions untold misery to women in local diseases it causes. Investigations now being made on the strictest scientific basis, prove that the toxic action of gonorrhea is far-reaching : that the specific bacteria which have been identified, pass into the system, demonstrate their presence in the joints—as observable in gonorrheal rheumatism—attack the heart, and the coverings

of the brain. We have not yet reached our limit of knowledge of the power of distribution and penetration of these germs.

I will forestall any objection which may be offered to my statement concerning the blind, an objection that would point out that the Credé method of instillation of nitrate of silver in the eyes of the new born babe, is a reliable, preventative of blindness. This is not a forceful argument, even could we rely on this preventive measure being universally used, which we cannot in the least, for it takes no account of the danger the infant is still exposed to after birth from infection by contact with the unclean hands of the nurse or with contaminated articles of clothing, etc., and at its best is but another palliative of conditions behind which lurk the real danger, still active and uneliminated.

Consider, if you please, the distribution of population. Only eight cities in the United States in 1790 contained 8,000 or more inhabitants, or 3.4 per cent, of the total population, so the first official census tells us. But the twelfth census of 1900 states that in that year there were 545 such cities containing 33.1 per cent. of the total population. Concentration of population in cities is the natural tendency of this age of commerce, manufacturing industries, increased facilities of communication and transportation. The town is also an irresistible magnet. If it is true, then, as we cannot doubt from the reports of medical men, that in our cities the existence of venereal diseases is almost universal—while we have no reason to suppose there is not a large proportion of such cases in rural districts—we must admit that something more is demanded of society for its conservation and improvement, than mere moral fulminations or the multiplication of hospitals and dispensaries.

Let us be practical, let us have these cases like those of other contagious diseases, reported to the health authorities under penalty omission to do so. Let us endeavour to make it impossible by public opinion and by law, for infected men to marry clean women, and vice versa. Let us remove by

legal enactment any obligation to secrecy now resting upon physicians treating such cases, when such secrecy imperils the patient's wife or children, or a prospective bride. This matter should not be left to the physician; it places far too great a responsibility upon him. Undoubtedly the communication of such knowledge may disrupt house-holds. He must be absolved as well as enjoined by law in taking such a momentous step. It is our responsibility even more than it is his. We are cowardly if we place the factitious peace of the individual or the family, before the true welfare of the community, the rectitude of our national life. By such cowardice we shall gain nothing, for the innocent will inevitably suffer for the guilty more through our pusillanimity than through our insistence upon equity and justice.

These recommendations are sound, but when we shall have adopted them we shall still have done our duty only in part. Education is our great resource in the prevention of these diseases, as in the prevention of tuberculosis. Securing the universal knowledge of simple, plain, absolutely essential truths about the most important organs of the body, truths more important than a knowledge of digestion, or the circulation of the blood, or fifty other facts now taught children in every school in the land. Medical men and women chosen for their exceptional fitness as to character, judgment, tact and wisdom will be the best media for the imparting of this knowledge, until the day when men and women equally, marry so instructed, and so instruct their children.

What is there to overwhelmingly disturb the self-consciousness of honest, intelligent people in a straightforward consideration of the organs of generation, how they should be cared for and rightly used, and what happens if nature's laws are disregarded? These are subjects of vital and general interest and importance, and only from a perverted viewpoint, a relic of the dark ages of ignorance, can the counsel continue to come, to shut one's eyes and one's children's eyes to what must be known wrongly and imperfectly, if not rightly and to the salvation of soul and body.

I will put this first in importance in the consideration of social hygiene. But before I close, I wish to make brief reference to another topic—the rapid increase in the production of the neurotic or nervous temperament in this country, and the increase which I have already mentioned of the feeble-minded and the insane. Fifty per cent. of the cases of insanity are traceable to alcohol and heredity; but this general term “heredity,” reaching farther back, still points to physical and mental deterioration through the moderate or excessive use of alcoholic beverages.

Prohibition by no means invariably prohibits; high license is of more than doubtful efficacy. We must secure the enactment and enforcement of laws preventing the sale of liquors other than those of demonstrable purity, aged by those natural processes which convert most of the deleterious, toxic constituents into essential oil and ethers. Laws which will require all liquors to be bonded ten years, both to obtain their natural ageing, and to place them in appreciable quantities beyond the purchasing power of the greatest consumers who are, be it noted, to a large extent the class of all others the most prolific of children. These children of dram drinkers are birth-marked with inherent mental defects and physical stigmata. Eighty per cent. of epileptics are the offspring of the users of alcohol; one-half of the insane population in our institutions, having physical defects, are epileptics. The host of feeble-minded and the great army of neurotics is recruited from the descendants of those who indulge in alcoholic beverages. The stimulus of our climate with its excessive amount of sunshine and extremes of temperature, the stress and strain of the competition in business, in society, in politics, would be alone sufficient to sap our vitality. Alcohol, drugs, late hours, ill chosen and hastily consumed food, the auxiliary stimulants, tea, coffee, tobacco, and patent medicines and above all an irregular or suppressed sexual life tax the physique to the utmost, and when to the above is added the handicap of the inheritance described, we cannot rationally expect that our nation can succeed in gratifying its ambition

to attain enviable power and enduring perpetuation among the nations of the earth.

The use and abuse of intoxicating beverages has been widely discussed. The word "temperance" has been so applied and dwelt upon, that unfortunately its meaning had been largely restricted to this one subject. It must be restored to its proper place, and be insisted upon in all the activities of life.

Although of necessity I have confined my remarks chiefly to two aspects of social conditions, I commend to your earnest attention all others intimately associated with them and, to a great extent, the outgrowth of these two potent factors. To the first, however, I will return with a parting word of emphasis.

When we shall spend as much money to secure freedom from venereal diseases as was spent in 1909 to secure immunity from the lesser scourge of tuberculosis, when we shall have distributed as much literature, provided for as much expert teaching, taken the situation as thoroughly to heart, then we may hope to lessen the extension and the effects of these infections.

Each generation leaves a three-fold inheritance, mental, moral, and physical, which posterity can neither refuse nor evade. Let us then care a little less about how early or how late we die, and a little more about how we live while the opportunity is ours to make a good fight for individual and social righteousness. It is said that we can not eradicate venereal diseases. Frankly I do not believe we can, but what I know is that we can lessen the number of those who contract them if we teach all classes of society their appalling nature; if we improve the moral stamina of the youth of both sexes by fortifying them with right knowledge of the organs and functions of the body; if we instil into their minds the eternal principles of duty, the never ceasing obligation to self-discipline and self-sacrifice.

Better, far better that we should be "faithful failures," to borrow Stevenson's phrase, in this battle for the well-being of

the community and the nation, than ignominiously to shelter ourselves behind the prejudices and platitudes of a bygone age and an outworn viewpoint. There is no exception made in the divine distribution of responsibility, be the apportionment small or great. To each one is given his opportunity and his obligation, and the accounting shall be equally of the individual.—*The North American Journal of Homœopathy*, July, 1911.

HOMŒOPATHY VERSUS SERUM THERAPY.

By Milton Powel, M. D., and John Hutchinson, M. D.,
New York.

Very many good homœopaths have been claiming for Homœopathy the results of serum and vaccination therapy. To our minds this is wrong, as Homœopathy and serum therapy have nothing at all in common, and are based upon two entirely distinct kinds of reasoning. Neither do the opsonic index theories aid the homœopathic prescription. As yet the law of similars appears to be superior to and quite independent to them.

It is true that no less a man than Sir A. E. Wright has said that "The physician of the future will be an immunisator," but it seems to us that with all due respect to this attention to the "future" which occupies the minds of so many twentieth century physicians the demands of sick people in the present must be met. Those demands are met by the science and art of Homœopathy. It will be early enough for that science and art to cease when the "future" brings their eclipse.

Wright says (p. 235): "The principle of serum therapy, that is, the idea of transferring to patients already the subjects of bacterial infection immunizing substances withdrawn from animals vicariously inoculated, appeals in a very forcible way to the medical mind by the fact that it promises a rational treatment of all bacterial diseases, and by the fact that it has fulfilled that promise in the case of diphtheria. The prestige which it has derived from the signal success," etc. We make no comment just here on this amazing attitude, statement, and

series of assumptions. They seem to be characteristic of the dominant school, which "promises" for the "future" "rational treatment."

The unproved substances employed in serum therapy have no correspondence with well investigated homœopathic remedies. The sera are complex materials, elaborately prepared, and their excuse for existence is an arbitrary one. Moreover, they are only suitable for use by the worker in experimental laboratories, if, perchance, he be also a physician.

For, as has been said (*New Serum Therapy*, Paton, 1906), "Antitoxin is not the only element in the antiserum." Notwithstanding this statement of an obvious fact, the complex organization of even one example of antiserum products is not explained by any correlated epitome or digest of its effects, despite the numerous untoward results that are recognized even by its friends.

Before the serum of a horse acquires sufficient antitoxic power the animal must be treated for five or six months by the chosen method. Then the serum is considered suitable for the human patient, provided he presents the single diagnostic indication of, say, diphtheria, or indeed if he be in perfect health. In either case he may receive maximum dosage or even dosage that is not tolerated.

Hewlett says: "It is better to mix the serum of several horses, if possible, as the serum is then less likely to produce rashes," etc. A small amount of antiseptic is generally added, *e. g.*, 0.2 carbolic acid or preferably, 0.3 per cent. trikresol. "Camphor, previously flamed to sterilize it, has also been used, but it is only a feeble antiseptic." (*Hewlett, Serum and Vaccine Therapy*, 1910.) Hewlett also says (p. 10): "There are two classes of curative sera, the one antagonizing the bacterial toxins, such as diphtheria and tetanus antitoxin to which the term antitoxin is alone strictly applicable, the other antagonizing the microbes, killing or otherwise disposing of them. This latter class may be termed antimicrobial sera, such are antistreptococcic and antiplague sera."

Against this, however true it may be, we can only say that the influence and effects of serum in a given case correspond not at all to those of the indicated homœopathic remedy. This remedy as the simillimum is unique, definite in its energy, and potent to a degree.

About twenty years have elapsed since diphtheria antitoxin was first introduced. Of all the sera now on the market, it is still the only one highly vaunted. Others have been administered as specifics, some extensively, but the results are not desirable for publication. Just how to vanquish the bacterium and not the patient is still the problem, and the precise vocation of the bacterium is yet a secret.

To quote Jules Bordet (Studies in Immunity, 1909, p. 1) : "Bacteria are highly adaptable. They frequently change both morphologically and functionally. Their virulence is also an essentially fluctuating property, that increases or diminishes according to the conditions to which the pathogenic organism is subjected."

Bordet, p. 8 : "The study of the serum of immunized animals forms a new chapter in the history of the struggle between the animal and infective agents, under which heading practical results of the highest importance are already inscribed. Any explanation of the phenomena is, however, still far from complete."

Bordet, p. 69 : *It would seem as if the serum of vaccinated animals had no particular bactericidal substance, but that a similar bacterial substance is present in the blood of normal as well as of immunized animals. This bactericidal substance is not specific unless mixed with the preventive substance, and under its normal conditions will affect only attenuated vibrios. Its energetic action depends on the combined presence of a preventive substance that is present only in the serum of immunized animals."*

Whatever that means we do not know.

Bordet p. 76 : "A bacterial property is not always present in the serum of immunized animals. The sera from animals

vaccinated against tetanus, diphtheria, hog cholera, etc., do not destroy their respective organisms."

Bordet, p. 77: "If there is a distinction then to be drawn between bactericidal sera and those that are not it is due to a difference in resistance of the specific organism, and not to the absence or presence of a bactericidal substance in the serum."

Bordet, p. 144: "*It is probable that serum acts on bacteria by changing the relations of molecular attraction between the bacteria and the surrounding fluid.*"

The last paragraph is italicized in the original, which seems to give it significance; and yet to us the conclusion appears to belong to that which is purely imaginary.

Bordet, p. 164: "The special properties that are found in the sera of vaccinated animals are present in a primitive form in normal sera. This fact probably has a distinct bearing on the specific nature of these substances in immune sera."

We ourselves are rather in favor of the "primitive form in normal sera." It seems to promise more than the probabilities that the author quoted and others are fond of entertaining. These probabilities seem to us a trifle hazardous to act upon, despite the fact that they *are* acted upon almost as if axiomatic—say, "A dozen probabilities make one certainty." This may be all right theoretically, but there remains a risk in its practical application.

It is clear that the task set himself by the laboratory worker in his declaration, "The antisera are specific," is one exceedingly difficult of illustration, despite the great and interesting thoroughness of laboratory industry in the twentieth century. The physicist, the biologist, the chemist, each does his own work in his own way, and his conclusions approach and suggest Homœopathy. But he does not as yet by any of his accomplishments express Homœopathy at all clearly. He has started with an assumption, a presupposition, that involves knowledge by himself at least of processes which can hardly be determined, much less explained. "It is one thing to recognize and count

corpuscles, quite another to reckon with their *vis a tergo*. Hypotheses may be useful and logical. They are dwelt upon in the absence of facts. It is, however, well to bear in mind that hypotheses as such are abandoned when facts arrive—not before.

The therapeutic problem of to-day is one of the safety, and it confronts the patient everywhere. It remains for us to determine whether it is right and expedient in the nature of medicine as a science and an art to invade the human organism with the forces of any crude procedure while the utility of that procedure is not positive.

The view of disease as due primarily to bacteria establishes the need of immunity. When the first premise, which we reject, is entertained by the bacteriologist, he ignores all evidence to the contrary.

The immunity proposition, that every one must have had a form of the disease in order to be safe, is assuming that individual resistive power does not exist. This assumption takes us back to the ancient inoculation theory, although the fashion in technique has changed.

Metchnikoff (p. 433) cites eight or more instances of immunity secured by natural means, including immunity acquired by heredity. He observes (p. 10) that "Immunity may be inborn or acquired," but he declares (p. 1), "The prevention of disease by the production of an acquired immunity is daily assuming greater importance." (*Immunity in Infective Diseases*, Elie Metchnikoff, 1905.)

By this it appears that artificial immunity is chiefly to be desired.

The laboratory of Homœopathy is the living human organism, and it includes in its equipment the whole man; not his body alone, but his mind and all his functions. This important laboratory differs essentially from the so-called biological laboratories that flourish by reason of arbitrary and empiric medicine, whose essential proclamation is that no rule, nor principle, nor law, exists for the constant guidance of the medical scientist.

We insist that only the laboratory of Homœopathy, the human being itself, its own economy, is delicate enough to aid and guide the therapist in his one glorious obligation to conserve human health. Rats and rabbits and guinea pigs, and even the noble dog, cannot tell us the things that we most need to learn. *

Again, Homœopathy's view of symptoms is unique. This view considers every phase of departure from health, and its standard of health is high. In a manner it is concerned less with the problems of disease than with the problems of health, for its recognition of symptoms as expressing departure from health is wonderfully keen. Consequently it cannot overlook the sick-making properties of medicinal agents, wherein lies the very nucleus of medicine. A knowledge of what to reject is as necessary as a knowledge of what is to be utilized. In other words, that which is of doubtful virtue, and which offers no advantage over what is well known to be of worth, cannot be accepted. If the homœopathist had only to cure his patients of disordered health, instead of the incalculable morbid disasters from unscientific drugging of all descriptions, his work would be done with infinitely greater ease.

Homœopathy has no use of an artificially prepared serum that is unproven, nor for the hypodermatic administration of medicine. Such agents and such methods are too coarse and brutal for vital employment, when human life is at stake. There is nothing in the vital integrity, to say nothing of the delicate complexity of the complete human organism, that gives license to brutality of treatment. Homœopathy is never clumsy nor crude, but it is perfectly adapted by the preparation and application of its agents to the correction of disturbed health, whatever be the grade or intensity of disturbance. It cures the sick.

Its remedies are proved as received through the mouth into the laboratory of Homœopathy, the man himself. Here effects are produced in a manner entirely safe, from dosage never hazardous, and the organism gives free expression to these effects in a manner that is fully intelligible.

Per contra, we quote from Hewlett, *Serum Therapy*, p. 77 : "The antitoxins and antisera are usually administered by subcutaneous injection. Various statements have been made and reports are frequently published in the medical journals of the successful administration of antisera by the mouth. In some experiments made by the writer it was found, however, that, using guinea pigs and rabbits, both diphtheria and tetanus antitoxins were completely unabsorbed when given by the mouth or rectum, and therefore this mode of administration must be regarded as inadvisable, particularly if a rapid action be desired." The idea here seems to be that what the rabbit stomach refuses must be forced into the circulation of man.

Whatever the ingredients of the serum, or the manner of its elaboration, its mode of exhibition is highly open to objection. The method is a most artificial one, by means of which the substance is forced directly into the organism itself without actual regard to that organism's resistance. This alone is against the spirit of science and rationality. Such is not the case with remedies entering an orifice of the body, applied to the mucous membrane, or when introduced even directly into the stomach. In a sense the remedy is still without the body. It has not reached the circulation. It has by no means secured lodging within the organism. There yet remains to the latter power to reject it, or, at least, a discretion as to the best disposition that is to be made of the foreign element.

It has been thoroughly demonstrated that remedies *per ora*, remedies rightly prepared and received therapeutically, have the most beneficent activity. At least, the organism reacts to them in a salutary way. Here is no forcing their ultimate ingestion against the vital powers. The discretion of these powers is held in real esteem, in that respect which serum therapy seems entirely to forget or disclaim. For it is not only sudden death that marks the harm done by such crude operations, there are other and *many* other grades of damage possible.

There is a vast difference in the curing of the sick individual

and in attempting to cure disease irrespective of the particular human organism which suffers the disturbance. Homœopathy demands individual care. This means specific treatment of the exact symptoms of the particular patient in which disease exists, not specific treatment of his disease *per se*. She has always a specific for his case, to be determined by his own peculiar features, never by virtue of the diagnostic appellation of his disease *in toto*, but only by the actual particular symptoms *in toto*.

The Homœopathic method provides adequate means of treatment as demanded by the aspect of the patient, apart from his case's history, which can rarely be secured in its perfection. Consequently, the needs of the case are emphasized and become at once translatable into terms of authentic provings.

Further, Homœopathy is prepared to rest on the fact that the condition cured by the remedy is the condition which that remedy will produce ON THE HEALTH OF THAT VERY PATIENT. She individualizes her case in proving as well as in healing. She perceives no need for so-called immunization of the case that has been healed.

Homœopathy provides an absolute or specific cure when the correspondence between the case and the proving is seen. That such correspondence is recognizable and is clearly discerned, the work of the faithful homœopathist constantly attests. Such work is as distinct from serum therapy in both intents and consequences as it is and was from routine blood letting, emesis, diuresis, diaphoresis and catharsis. It is only a part of fate's cruel or comic irony with things human, that which has been held the first subject of ridicule in homœopathic medicine, *the small dose*, is exactly that thing to which our friends, the enemy, are being led, though they cling with almost sublime persistence to the most indirect path. If they ever reach the small dose of Homœopathy they will not be able to practice allopathy with it, any more than can some in our own ranks at present succeed allopathically with homœopathic remedies.

The real likeness that serum therapy bears to Homœopathy is its concession to the latter that the earlier crudities in domi-

nant medicine were bad. Yet if these crudities of later date are better, they are still too crude to bear any worthy relationship to Homœopathy.

The aims of Homœopathy and those of serum therapy are totally unlike. While one is founded on demonstrated natural law, the other seeks to gather through the medium of human intelligence and animal experimentation—resulting in a combination of assumption and deductions—a precise knowledge of every detail of distinct and separate vital processes, a comprehension of all their various meanings and ends. A pure analysis of any and every function, as it were. Such order of aim is manifestly incapable of seeing that no advantage is to be gained by eradicating directly certain phenomena of disease at the cost of the total vitality. Such is not scientific medicine at all, it is malpractice. It menaces human health and medical progress worthy the name.

When we are told that on injection of “606,” “Salvarsan,” a severe syphilitic process promptly yielded, but a relapse took place in the form of a severe headache, lasting several days and was followed by optic neuritis, we are not quite able to share the view of the doctor that the few cases of optic neuritis reported as having been due to this up-to-date “remedy” are of insufficient weight to bring the “606” into discredit (*Berliner klin. Woch.*, Nov. 21, 1910.) Yet, such optimistic conclusions seem to follow laboratory leadings. e. g. It undoubtedly must be so, for when humanly speaking a certain thing has been destined for a certain purpose, that purpose must have been served! It is like the compound prescription. The doctor puts in a drug for the constipation, another for the fever, another for pain, another for sleeplessness. It stands to reason that each drug will mind its own business and go where it is sent and go nowhere else!

However, this is a long way from the laboratory of Homœopathy, being wisdom that has no chance of classification there. And when we consider that one of the vaccines has by law been

forced upon the public, we are less and less inclined to credit Homœopathy with its power for either good or ill.

Even Wright shows that the opsonic index in a given individual is very changeable from hour to hour. This to our mind, evidences that something is wanting in this mode of estimating the *vis viæ*, the mainspring of vitality. We cannot for this and other reasons attach importance to the claim of investigators that say "*Veratrum viride* will raise a person's opsonic index against the pneumococcus from 70 to 100 per cent." Even if the phenomenon occurred, is it surely a good one? Why leave out of consideration the great truth of the larger individual susceptibility of the patient, only to be determined by the wider range of individual symptoms, irrespective of the specified cocci? We certainly know that the healthy man may harbor almost a full menagerie of the fearsome and terrible bacteria!

Homœopathy does not assume to know how remedies act in restoring health when they are rightly selected according to definite indications. We do not assume to know why it is important to observe exactly modality of symptoms in order to select the curative remedy. Did we assume to know these things it would not make us scientific physicians nor masters of the healing art. We do not know why the apple falls to the ground, but its fall ever attests the truth of the law of gravitation.

The law of cure, forever appreciable by inductive reasoning in the laboratory of Homœopathy, has established the great trinity of medical exigency: The study of the patient, or taking the case, the study by itself of every single remedy employed in medicine, or proving in its purity, and study of the relation of patient and remedy to each other, which leads to cure.

Before us lies the monograph of a specialist of wide observation. He discusses the progress in treatment of a certain disease, asking the question in his title, "Have we made any progress in the treatment of this disease? Then he reviews the successive authorities, deplores the complexity of treatment

of thirty years ago, and concludes thus: "The subject is a large one, and much remains to be accomplished, yet, notwithstanding the dubious tone of the literature which I have tried to review, I am satisfied that real progress has been made."

This is only one instance of many that come to our notice. We can hardly agree with the present citation in respect to its conclusion. We do not discern in these things real progress. We are sure that this audience does not discern in them real progress.

When we see in the mortality statistics the figures for diphtheria, influenza, pneumonia, erysipelas, septisæmia, typhoid, tuberculosis, and cancer, and are told that tuberculosis and cancer are on the increase, amongst other things that come to mind is the thought of the relation of both tuberculosis and cancer to vaccination. What is the profound effect to vaccination to prevent small-pox on the vital integrity of the race. The acute effects are often disastrous, but what shall be said of those which insidiously hide themselves until a larger focus of disease is manifest internally?

Metchnikoff relates that in two cantons of Switzerland where vaccination was obligatory there were more cases of small-pox than in three other cantons where the vaccination law is abolished. He says, "It is impossible to draw from it any conclusion whatever," since there may have been fewer persons vaccinated in the compulsory vaccination district than in the non-compulsory districts owing to the law not being enforced in the former.

This somehow reminds one of the remark of Sir Oliver Lodge, in "Reason and Belief," 1910, p. 136:

"But to say that a scientific man puts forth a theory, and supports it and adheres to it, not because he thinks it true, but because he wishes it to be true, is the same thing as saying that he is not a seeker after truth at all, and is, therefore, a traitor to his profession."

In conclusion, we maintain that the two schools of medicine will always remain apart. Because Homœopathy seeks the spe-

cific remedy for each individual case, no matter what the name of the disease may be. While the other school seeks the specific remedy for the disease itself, no matter what the symptoms may be of individual cases. The lines of investigation of the two schools do not run together, they are not parallel, they are divergent.—*The Homœopathic Recorder*, August 15, 1911.

EDITOR'S NOTES.

Ten Remedies Prescribed on Four Symptoms.

By H. L. Stambach, M. D., Santa Barbara, Cal.

Anacardium.—Forgetfulness and loss of memory ; irresistible desire to swear ; great desire for stool, but rectum seems powerless, paralyzed and plugged ; "all gone" feeling when stomach is empty, ameliorated by eating and during digestion (reverse of Bry. and Nux).

Aurum Triphyllum.—Constant picking at nose or lips until they bleed ; corners of mouth sore, cracked and bleeding from profuse corroding saliva ; bites nails until finger-tips bleed ; refuses food and drink on account of sore aphthous in mouth and throat.

Ambra Grisea.—Violent, hoarse cough, in paroxysms, followed by empty eructations ; aggravated by talking or reading aloud ; evening without, morning with expectoration ; whooping cough, but without crowing inspirations.

Ledum.—Rheumatism or gout if beginning in lower limbs and ascending ; especially if from abuse of colchicum ; pains worse from warmth ; ameliorated only when placing feet in ice-cold water.

Colchicum.—Smell painfully acute ; nausea and faintness from the odor of cooking food, especially fish, eggs or fat meat, aversion to food, loathing even the sight and still more the smell of it ; abdomen immensely distended with gas, feeling as if it would burst.

Coffea.—Sleepless, wideawake condition, impossible to close eyes ; physical excitement from mental exaltation ; bad effects from sudden emotions or pleasureable surprises ; weeping from delight or alternate laughing and weeping.

Rheum.—Child has sour smell of whole body even after washing or bathing ; screaming of children with urging and sour stools ; impatient, desires many things, cries and dislikes even favorite playthings ; after abuse of magnesia if stools are sour.

Secale.—Dry, senile gangrene, worse from external heat or covering ; extremities icy cold, yet cannot bear to be covered : worse from cold air : large ecchymoses, blood blisters, often commencement of gangrene.

Stannum.—Pains of headache or neuralgia increase gradually to highest point, then gradually decline ; feels like crying all the time, but crying aggravates ; feels faint and weak, especially when going down stairs,—can go up well enough ; nausea and vomiting in the morning or from the odor of cooking food.

Stramonium.—Incessant and incoherent talking and laughing; praying, beseeching and entreating; desires light and company; imagines that she is double or lying crosswise.—The *Journal of the American Institute of Homœopathy*, April, 1911.

' The Discovery of Chloroform.

The centenary of the birth of Sir James Young Simpson occurs on the 7th of next month, and the *Evening News* of Edinburgh has been recalling some facts connected with the man and his discovery. When Simpson passed away on May 6th, 1870, a grave was offered in Westminster Abbey, but he rests in Warriston Cemetery, Edinburgh. There is a statue of him in West Princes Street Gardens, which keeps his memory green; and the portrait by Moffat is according to his nephew, Sir Alexander Simpson, a speaking likeness. He was worn out before his time by manifold labours, and there is pathos and truth in the words he uttered when on his death-bed. "How old am I? Fifty-nine. Well, I have done some work; I wish I had been busier." Details, some of which are contradictory, have from time to time been given as to how Simpson made his happy pit. He tried the anæsthetic first upon himself and some other doctors, one of whom, Dr. Mathew Duncan, many in London will still remember. "The first night we took it," said Simpson, "Dr. Duncan, Dr. Keith and I all tried it simultaneously, and were all 'under the table' in a minute or two." Dr. Simpson concluded that chloroform was stronger and better than ether. He found himself prostrate on the floor after one trial, while Dr. Duncan was snoring heavily, and Dr. Keith kicking violently at the table above him. Miss Petrie, a niece of Mrs. Simpson's, was the first woman to be "chloroformed," and the first child born under its influence was christened Anæsthesia. The first public test was in the Edinburgh Infirmary, November 15th, 1847, where Simpson, as a student, had previously shrunk from the sight of human pain and suffering.

Dr. John Brown, in "Rab," called the new anæsthetic "one of God's greatest blessings to his suffering children." Simpson had to defend himself from vituperation in many quarters, and wrote a paper, "The Defence of Anæsthesia," against the Scriptural objections. He often risked his own life in the effort to discover a still better means to banish pain. His servant, Clarke, on finding

him insensible in his room, said: "He'll kill himsel' yet wi' thae experiments, an' he's a big fule, for they'll never find onything better than chlory," as he called chloroform. Indeed this servant made an experiment himself on the cook, prevailing upon her to drink a mixture of champagne and chloroform. The result was, as might be expected; Clarke came flying upstairs saying, "Come doon, come doon, doctor, I've pushioned the cook deid"!—The *Homœopathic World*, August 1, 1911.

The Automobile Smoke Nuisance.

The comment has frequently been made that there is in the United States less personal liberty than in most of the monarchical countries of Europe. The principle that "one man's liberty ceases where another's begins" has never been thoroughly mastered by the free American citizen, who disregards many of the primary rights of his fellow-man, often with an exasperating degree of immunity. In most of our large cities the general public shows a surprising amount of tolerance of abuses which are sometimes serious, yet often easy of redress. The National Highways Association is endeavoring to secure an amendment to the Callan automobile law, which is calculated to make it more practicable in its provisions against smoking cars. The language of the present law is, "dense" smoke, a term which has in practice been found to be unfortunately lax, with the result that arrests of chauffeurs for allowing their cars to smoke within the city limits have practically ceased within the last few weeks, as conviction and fine have been too difficult. The emission of visible vapors is entirely unnecessary, and is usually an evidence of unskillful driving. To the public, who have to inhale such vapors, it is a nuisance of the first rank, and should be abolished.—The *Journal of the American Institute of Homœopathy*, July, 1911.

To the Critics of the Medical Profession.

Every earnest physician merges himself in his work as do men in few other callings. The practice of medicine is a humane profession. All unconsciously the spirit of unselfishness creeps into a true doctor's life, and sooner or later he finds himself living not for himself but for humanity. There are plenty who will scoff at this and ridicule the idea. But every doctor who reads this knows that there is an exaltation felt by those who minister unto the sick and suffering that makes the active practice of medicine the most

gratifying, most satisfactory calling on earth. It is good to be a doctor of medicine, to feel the responsibilities one is forced to assume,, and then to realize the trust and confidence that patients give to us in their hours of greatest distress and anguish. It is these very things that make the practice of medicine ennobling in many ways that only those engaged in its pursuit can understand. If the laity could only grasp and analyze the psychic effects of the sense of personal responsibility that becomes a real force in every honest doctor's life, there would be a great deal more sincere respect entertained by those who are now all too prone to criticize and condemn.—*The Journal of the American Institute of Homœopathy*, August, 1911.

Eye Symptoms in Diabetes.

The most common eye complication of diabetes is cataract. Diabetes should always be thought of when opacity of the lens develops in both eyes in middle life, progresses steadily and sometimes rapidly, and is not accounted for by pre-existing disease of the eye or trauma. In most instances the opacity is the same as in senile cataract, but in a small minority it appears characteristic of diabetes in the form of diffuse bluish haze of the anterior layer of the lens with well-defined radiating lines indicative of the segmental arrangement of the lens fibers. The progress of cataract can be checked if the disease is controllable by diet. When this is not the case the opacity continues to increase steadily, though not always at a uniform rate.

While diabetic cataracts have been removed satisfactorily by all ophthalmic surgeons, some have been impressed by the greater danger of the operation of diabetics. A large statistic record last year by Uhthoff has not borne out this impression. His results were not inferior to the average obtained in non-diabetic subjects, but he admits the greater probability of delayed healing caused by transient iritis. In the discussion at the Heidelberg Ophthalmic Society, following Uhthoff's paper, most operators agreed with the good prognosis of the operation, even when sugar is present and no dietary restriction has been adopted. It is, however, common surgical experience that diabetic patients are always endangered by general narcosis, particularly from chloroform.—*The Journal of the American Institute of Homœopathy*, August, 1911.

Fat Transplantation.

At the meeting of the German Association of Scientists and Physicians (September, 1910) Dr. E. Rehn (*Wien. klin. Wochensh.*, No. 40, 1910) presented five patients on whom he had successfully performed autoplasmic transplantation of fat for depressed cicatrices. He found that a small incision sufficed to form a pocket for the implanted fat. The material was taken either from the abdominal walls or the upper portion of the thigh. Although a certain amount of shrinkage took place, this could be compensated for by taking a sufficiently large flap of fat.—*The Journal of the American Institute of Homœopathy*, June, 1911.

The Crux of the Tuberculosis Problem.

Lawrence L. Flick, of Philadelphia, Pa., says that the source of all tuberculosis is the tubercle bacillus and its communication from one subject to another. We may prevent tuberculosis entirely if we can teach every tuberculous subject to spit in a paper cup, cover his mouth in coughing with a paper napkin, and destroy the cup and the napkin by fire. Most cases are for a long time not contagious, it being only after ulceration has occurred that the bacilli are liberated. For about six months, on an average, a patient is actively contagious. If advanced consumptives can be isolated we shall have little danger of contagion. The best method of doing this is to admit them to the general hospitals, instruct them in prevention, and see that they carry out the prescribed measures.—*The Journal of the American Institute of Homœopathy*, June, 1911.

CLINICAL RECORD.

Cases.

BY A. S. ALEXANDER, M.D., C.M.

Case 1.—Mr. J. W. M., aged 59, applied for advice on October 19, 1907, with the following history. For the last two days he had been troubled with double vision. All objects looked misty and he was suffering from frontal headache, but no nausea or vertigo; there was also some watering of the eyes, and hyperæmia of the conjunctiva. He stated that the double objects seen appeared to be side by side. He was a myope, and was wearing R—2.50 D. sph., and L—3.50 D. sph., with which his vision was $\frac{5}{6}$.

Examination of the eyes showed that the right eyeball could not be abducted beyond the middle line, while it could be turned inwards freely, thus proving that the external rectus muscle was paralysed.

No definite cause for the paralysis could be ascertained, though the patient himself attributed it to a good deal of worry and anxiety, which he had lately been going through. The more likely explanation, however, would be exposure to cold and damp. Curiously enough, a brother of the patient had been treated for a precisely similar attack a few years previously. In the latter case the remedy given was gelsem. semp., under which the patient recovered quickly and completely.

This drug was also given in the present instance, the leading reasons for its selection being that in its pathogenesis there occur these significant symptoms:—Objects appear double, especially when inclining the head to either side, but single vision when holding head erect. Diplopia which can be controlled by an effort of will.

All these symptoms were not observed in the case before us, but the resemblance was sufficiently close to justify the choice of the remedy, particularly as it is said and known clinically to act most decidedly on the external rectus the muscle at fault in the present instance. It was accordingly prescribed in the 3x dilution, every four hours.

On the 23rd, the patient reported that the diplopia was much less, vision not so misty and headache gone. By an effort of will he could now approximate the two images of the point of light at 20ft. The right eye, however, was still very faulty in its movements, and could hardly be brought beyond the middle line in the external direction. Continued gelsem.

On the 26th, there was practically no further improvement, and

the prescription was therefore changed to causticum 6, thrice daily. The symptomatology of this drug is highly suggestive of paralysis of the ocular motor muscles, and clinically it has often been proved to be of great value. It has caused in its provers twitching of the lids and eyebrow, heaviness of the upper lids, with difficulty in opening them, obstruction of vision as by a cloud or fog before the eye, besides many other symptoms of a subjective nature. Clinically, as already stated, its chief sphere of action has been found to be in affecting the external rectus, levator palpebræ superioris and obicularis as well as the ciliary muscle, especially where these muscles have become paralysed as a result of exposure to cold and wet.

November 2.—The eye can now be abducted a little beyond the middle line, but only with considerable effort. The diplopia is much less marked, and is only noticed occasionally.

November 13.—Abduction is now very much better, and the eye can be turned outwards with less effort. The subjective symptoms are lessening. Cauticum 200 was now given, a dose every other day.

December 7.—On this date the patient reported that all trouble was practically gone, and it was found that the eye could be completely and easily abducted.

It will be observed that although improvement in the eye began under gelsemium, yet there was no recovery of the power of abduction till causticum was given. That function improved considerably under the influence of the 6th dilution, but it was not till after the 200th had been given that complete restoration took place.

In the case of vertical diplopia due to paralysis of the superior or inferior rectus muscle, the results of medical treatment do not seem so favourable as in the horizontal type. There is one symptom usually noticed in paralysis of the superior rectus, however, which is highly suggestive of a certain remedy. This is the tendency on the part of the patient to tilt the head backwards in the effort to bring the palsied eye into the correct line of vision. The medicine referred to is senega, which possesses this remarkable characteristic in its pathogenesis—namely, diplopia relieved by bending the head backward. This drug might therefore be tried, especially in recent cases, with fair prospect of relief. In my own experience, however, I have found it necessary in such cases to prescribe prisms, to compensate about half the error, with the base up before the one eye, and down before the other.

This usually gives very satisfactory relief. Where the oblique muscles are implicated, or there is a combination of horizontal and vertical diplopia, it may be necessary to prescribe prisms set obliquely, in accordance with the law of the resultant of forces. The full discussion of this subject is, however, beyond the scope of the present address.

Case 2.—Mrs. A., aged 35, seen on March 29, 1910. This patient applied for advice on account of sudden and complete loss of vision of the left eye about ten days before her visit. No cause could be assigned for the condition.

Examination under homatropine was made, but no view of the fundus could be obtained. The interior of the eyeball appeared to be occupied by a dark greyish mass, with only a slight, light reflex towards the inner margin of the dilated pupil. Sight was absolutely *nil*, even perception of light being absent. The ocular appearances were not those of detachment of the retina, and the loss of sight having occurred suddenly, the latter was probably due to hæmorrhage into the vitreous. But for a trifling degree of hyperopic astigmatism, the right eye was normal.

The general health appeared to be good, and save for the local condition, there was nothing on which to base a prescription. With a view of promoting absorption of the effused blood, lachesis 30 t.d. was given, that drug being well known to be useful for such a purpose. This was continued for a month, and on April 26 the patient was able to see some objects indistinctly, such as the hand held before the eye, and a book lying on the table.

The treatment was continued, and on May 10, she could count figures at a distance of 10 in. Treatment had now to be given for rather severe menorrhagia, and platina 30 was therefore substituted for lachesis. This effected the desired object, for by the end of May a normal period had come and gone. At that time the ocular condition was about the same as the month previously.

The lady had now to go abroad for several months, and she was therefore put on a course of treatment to be continued till her return to London. Three medicines were therefore preprescribed, namely, arnica 6, lachesis 6, and phosphorus 30, to be taken thrice daily on alternate weeks.

She was not seen again till October 4, when a decided improvement had taken place. A clear view of the fundus and optic disc was obtained, though there were numerous opacities seen floating about in the vitreous. Obviously, therefore, absorption of the

hæmorrhage had been taking place. Vision, without any lens, was found to be $\frac{5}{18}$.

Lachesis and phos. were continued for another month, when still further advance was manifest, the patient being able to read $\frac{5}{8}$ letters, and all of them clearly by the aid of a + 0.25 cylinder.

The case is recorded as an illustration of the help that may be derived from these medicines in clearing away hæmorrhages from the vitreous and also retina. Other examples of such effects are not infrequently met with in ophthalmic practice. Whether the *vis medicatrix naturæ*, unaided by extraneous means, might have been equally efficacious, I am unable to say, never having had the courage to leave such cases untreated.

Case 3.—In March, 1910, M. A., a girl of 15, came to the Eye Department of the London Homœopathic Hospital, on account of intense swelling and inflammation of the right eyelids. The latter were highly cedematous, reddened, and bulging forwards, these changes being accompanied by great pain. The eye was completely closed, and could not be opened. Fomentations were applied, and *apis mel.* 3x given internally. By these means, the acute symptoms were gradually got under, and in a day or two an abscess was found to be pointing over the lachrymal sac. Being on the point of bursting, it was, incised, and a large quantity of pus evacuated. Thereafter, *silicea* was prescribed, the sac being syringed with argyrol 5 per cent. solution.

Further investigation of the case having been made, it was now ascertained that the child had been attending the Out-patient Department of the Hospital under Mr. Wright, on account of atrophic rhinitis, and that she had also been suffering for some months from suppuration of the right middle ear. It was thought that the eye had probably been infected from the latter source.

Under the treatment mentioned, the cedema was soon subdued the discharge decreasing in quantity, but a lachrymal fistula remained. To give exit to the discharge by the natural channel, the *canaliculus* was now incised, and the sac regularly syringed with argyrol through it.

This treatment was continued for several months, but though the fistula closed at times, it always opened up again as soon as any pus collected in this sac.

The question of extirpation of the latter was discussed, the lining membrane being apparently in a highly pyogenic condition, but the idea was negatived on account of the *ozæna*, the discharge

connected with which might have reinfected the wound *via* the nasal duct.

The foregoing treatment was therefore continued, the dilution of the silicea being raised to the 200th, but still with no further improvement.

Shortly before the Hospital was closed for alterations in July, it was decided to adopt a method of treatment advocated by an American practitioner, Dr. Dowling. This consisted in an attempt to drain the accessory sinuses, particularly the ethmoid cells and sphenoidal sinus, with a view of thus removing all possible source of infection from these regions. This object was effected by the following means. A plug of cotton wool, soaked in argyrol solution, 40 gr. to the ounce, was introduced into the middle nasal meatus, as far back as possible, and preferably to be inserted between the middle turbinate and septum. This plug was to be left *in situ* for twenty minutes, and the naris thereafter douched with glyco-thymoline, or other cleansing agent. The treatment was to be carried out in both nares on alternate days. The presence of the plug was attended by a good deal of local irritation, lachrymation, sneezing, &c., and on being withdrawn the dark brown colour was found to be partially bleached by the action of the purulent discharge on the argyrol.

The patient was instructed how to proceed, and was asked to continue the use of the plugs daily till the reopening of the Hospital.

On Thursday, September 23, the latter took place, and on that day, the girl presented herself for inspection. The results were most striking. The fistula was firmly healed, there was no regurgitation of pus on pressure over the sac, and the patient stated that there had been none for several weeks. The offensive nasal discharge and crust formation had also practically ceased, and likewise the otorrhœa. No local treatment had been used for the ear, so that in its case, the effect was probably attributable to the silicea 200 alone. The latter no doubt played its part in the case of the dacryocystitis and ozena, but there can be no question that the argyrol plugs were the chief factor in their cure.

It may be added that Dowling has used this method with success in the treatment of glaucoma, where at the same time there was any reason to suspect the presence of suppuration of the accessory nasal sinuses, which he regards as a main factor in the etiology of such cases.—The *British Homœopathic Journal*, June, 1911. •

Gleanings from Contemporary Literature.

SOME OF THE NEEDS OF THE MEDICAL PROFESSION AND HOMŒOPATHY.

By CARL. H. WINTSCH, M.D.

Newark. N. J.

It seems to me that in addressing you upon a few of the more important medical matters pertaining to our Society, I ought to refer to the lack of disposition on the part of the general public to give the doctor due credit for his efforts and accomplishments. Seldom indeed does the picture of a physician alone in his office burning the midnight oil as he studies his case and consults authority after authority appear to imprint itself upon the mental vision of the layman.

This matter of the distrust with which the general public views the medical profession is unquestionably in a very large degree due to the public's misunderstanding of the medical profession, its aims and accomplishments. We must frankly admit, however, that we are not entirely undeserving of criticism at times—not as a profession, understand me, but because of those comparatively few medical men, who with but very little conscience and less ability creep into the profession and commit acts which reflect upon us all, however efficient, successful or honorable we may be.

We all admit that it is our profession's misfortune that medical men too frequently can be employed to testify as desired, provided a fee of suitable proportions be obtainable, and this is one of the things that has most to do with the creation of a false and prejudiced idea regarding us as a whole. It is the few irresponsible doctors who, disregarding the ethics of our profession, give cause to just such remarks as were recently made by a prominent business man. He said: "The medical profession is made up of a narrowminded, jealous body of men, who back-bite each other, who are willing to testify to anything and who, while they brag about their charitable work to hospitals, devote such time in reality to the increasing of their knowledge and experience."

It will be noted that his remark toward the close is somewhat paradoxical and hardly unflattering in so far as it refers to the profession's desire to increase its knowledge.

It may be here apropos in referring to the public's indisposition to grant the medical profession its full dues to refer to the attitude of our last governor, who held us as a body in such small consideration that when he appointed the State Board of Health but one physician was appointed by him on said board.

Again, such actions as that of the Legislature of Colorado, which introduced a bill holding a surgeon guilty of malpractice if he happen

to remove an appendix he could not prove to be diseased, gives a further line upon the general idea regarding us.

We must remember that irregardless of how proficient we may be or how wonderful our accomplishments in the relieving of human-kind from its bodily ailments that until we combine with our skill a disposition to proceed along ethical lines and with a full regard for a life of rigid morality, gentleness and absolute veracity, we will have failed largely in the purposes of our being. It is the surgeon who makes dishonest diagnosis for the purpose of a useless operation, for the purpose of returning him a considerable fee that produces the trouble, and besides, the publication of such muck-raking articles as Barnesby's "Medical Chaos and Crime." The physician who possesses all that the medical school can give him, including an experience in the surgical clinics of Europe and yet who performs his work with the heartlessness of a butcher, has not cultivated the faculty of the great physician and neglects the opportunities given him of elevating the profession in the public's mind.

~ The whole neighborhood looks askance at a family wherein internal dissension is too frequently apparent, while the ideal home and the characters of those who compose it is largely judged by the amount of harmony in which its members live. If this is true of the home, it is also true of the Society and it behoves us—all of us—to make those mutual concessions that will tend to, remove friction, allay misunderstanding, and impel us, in view of the greatness of our opportunities to subordinate the minor passions and prejudices that somehow or other seem at times to enter all of our lives.

We all recognize the lamentable fact ~~that~~ we have lost one good member after another merely through some misunderstanding or foolish personal feeling. So long as envy or jealousy, even to the smallest degree, is existant and induces this or that member, because he holds no official position in the Society, to display a disinclination to attend these meetings, just that long will we fail in achieving the most beneficial results of our united efforts. If we will conduct ourselves so as to commend faithfulness one to the other, misunderstanding will gradually disappear. If each of us has our fellow member's interest at heart to the extent that we will exult in his progress or elevation, then we will have accomplished more for ourselves as individuals than for him or for the Society itself. We cannot afford to be narrow, we cannot afford to be dogmatic in our efforts to conserve life and relieve suffering. We need MEN in this day to bring about the liberalization of medicine.

But we need more than the spirit of mutual concession to accomplish our purposes. We need strenuous spirit, the aggressive, pushing, "get there" disposition that has always been in evidence in the consummation of the world's greatest works. All of this means that we must have the welfare of our Society at all times in our hearts and means that we must think of it constantly and that we should remember that

whatever great things we as individuals accomplish will redound to the good name of our Society and exert a helpful influence upon our fellow members.

There is strength in union and the influence of this Society will be in exact proportion to the loyalty of our members one to the other. And as we as a Society grow in strength and as the individual members who compose it grow in achievement, so will we as a body command the increasing respect of those with whom we deal in matters of law, politics and with those relations which have to do with man's transactions with his fellow man.

I desire here to suggest the necessity of our State Society standing behind the County Societies and their members when the latter are threatened with civil suits in the legitimate practice of their calling. We as physicians, should not be left to stand alone with our too frequently limited resources, but just as long as ours is a rightful cause the entire profession of the State should be willing to stand behind us and, through its Society, defray the cost of our defence. Through measures such as these, and only by such methods, can this Society be made to represent the real spirit of medicine, cultivating that fraternalism which is the greatest help in the building up of a strong organization. If we have grievances, bury them and bury the hatchet alongside. Let us smoke the pipes of peace while our hearts glow with brotherly love remembering always that of all professions that of medicine must ever march in the van.

But we need more power, and the duty devolves upon us of compelling the world to recognize that we as physicians have rights that must be accorded us. More than that, we should convince the world that having secured these rights, the public itself will profit no less than will we in possessing them. Physicians are entirely too lax in their attention to matters pertaining to legislation. This is an unfortunate condition that it is incumbent upon us to do away with.

Our Society should be in direct touch with our Legislators, and should be represented during the session by one or more of the members of our legislative committee, and should defray the expenses of such members, if we are to keep in touch with the legislation affecting our profession or the health of the community.

Too little consideration has been given the medical profession by the Governor of our State in the appointment of members of the State Board of Health, State Board Medical Examiners, Managers of State institutions, etc. Can it be said that the Governor is totally to blame because of such action? May it not be true that we have been dilatory or negligent in impressing upon him and impressing upon our legislators the necessity of having more representative members upon these boards—physicians who are qualified to fill the offices and who have the welfare of the public at heart no less than the Governor or his advisers themselves.

It will not do to assume that the chief magistrate of our State is conversant with the value of our co-operation and that he ignores us merely because of political expediency. We should not forget that the possibility, perhaps even the probability, exists that he knows nothing of physicians as a rule except as told by some political friend in recommending this or that doctor for preferment.

Bacon has said that "the greatest trust between man and man is the trust of giving counsel." We should see that the value of our counsel is recognized by the greatest of our State officials and we should further be prepared to convince him that we are worthy of the trust. We should have his confidence even to the extent that when our Society recommends to him the names of physicians whom we can conscientiously endorse for appointment, that he will,—unless swayed altogether by political persuasions—see his way clear to appoint those who bear our endorsement. We constitute a part of our body politic and no legislation having to do with the health of the community should be enacted without a just recognition of us.

The osteopaths have introduced into the Legislature each year for the last ten years a measure which gives them a separate board of examiners. I am inclined to believe that the only rational method for us as a Society or as a profession to follow is to give that school one member of our present State Board of Medical Examiners, who shall examine the osteopaths on their method of digital manipulation. A single board would not be fair to the other schools represented in our State, while it is equally true that it would also tend to lower our present educational requirements.

Reference to the matter of civil suits brings to mind the all important question as to what action should be taken against the physician who practices illegally. You and I practice medicine by virtue of a license issued by the State Board of Examiners. Any one can practice medicine in our State without interference. Recently I went to a member of the State Board of Examiners and told him that I knew of some men practising medicine without licenses. He told me that the State Board were not policemen, but merely an examining board, and sent me to the prosecutor. The prosecutor, if anything, less inclined to take serious notice of the information than the member of the Board of Examiners, asked me if the doctors were doing any harm, and if not why worry about them.

Mature deliberation will force upon your minds as it has upon mine, the tremendous danger that exists by reason of this indifference of our public officials to recognize the value of the medical profession to the world at large and the great danger if unlicensed practitioners are permitted to ply their trade always for gain and as a rule totally indifferent to the success of their ministrations. Under such conditions as are permitted to exist, quackery and incompetency are more dangerous than the disease itself.

If there is any one profession in all this world where the value of constant practice and experience show in such tabulated records as are made, that profession is the one of medicine. If there is any one profession in all this world which humankind can least afford to dispense with, that, too, is the profession of medicine. All of this means, therefore, that since practice and experience are most helpful in relieving the physical ailments of humanity that every opportunity should be given the physician to secure experience and increase his knowledge of what and what not to do concerning this or that disease. It means that physicians should be assisted in the development of their scientific and clinical work. Moreover, it means that no sincere and educated physician belonging to any school should be ostracized because of his sincere beliefs in therapeutics. His one standard should be that of knowledge, character and professional conduct. The real sectarians in religion or medicine are the intolerant and bigotted. The greater the opportunity for acquiring experience the more certain it is that the differences existing between the various schools of medicine will gradually disappear, because with complete knowledge comes perfect understanding and with perfect understanding it is impossible for men to disagree.

We in this State have profited not a little by the opportunities which have been given us for studying disease. In providing for the use of the physicians of Newark a bacteriological and pathological laboratory, the Newark Board of Health has given to not only the medical profession, but to the entire community, inestimable assistance.

The clinical material in different hospitals of the city should be accessible to the physicians at large and not limited to a few physicians. The knowledge to be derived from observation of patients in the hospitals which are supported by the City, County or State funds should be available under proper restrictions to every legal physician as a right to which he is entitled.

We are all taxed alike for the support of the hospitals and yet you as a physician cannot treat your own patients if they are taken to such hospitals unless you be of the staff, and that, as we all know, means the possession and utilization of political pull or other powerful influence.

It may be proper for me here to refer to the hospitals of Newark, all of which receive municipal aid except the Homœopathic Hospital, which hospital, by the way, is the only one open to all reputable physicians.

In Newark we have the following hospitals :—

City Hospital, 320 beds ; St. Michael's Hospital, 300 beds ; St. Barnabas Hospital, 84 beds ; St. James Hospital, 75 beds ; Beth Israel Hospital, 80 beds ; German Hospital, 75 beds ; Homœopathic Hospital, 52 beds ; Home for Crippled Children, 55 beds ; Newark Eye & Ear Infirmary, 34 beds ; Babies Hospital, 31 beds ; Women & Children's Hospital, 32 beds ; and Presbyterian Hospital (when opened) 21 beds.

These then are public hospitals of Newark, having a total capacity for patients of 1159 beds and requiring the service of 172 physicians.

The figures for private hospitals would, of course, considerably increase the total.

In the onward march of history the medical profession has ever been in the van, and among the mile stones that mark its progress none are significant than that one having to do with the inauguration of the Homœopathic school.

To-day the term homœopathic does not grate upon the ear of the liberal minded men of whatever school. We hold fast to our historic name and to our fundamental principle because that name can no more be separated from the law of similars than can the teaching of Martin Luther be separated from the history of the Reformation.

We are physicians first, and homœopaths secondly. We recognize the fact that it is the duty of the physician first, to prevent disease if possible, secondly, to cure by the safest and surest method at our command and thirdly, to comfort and relieve the incurable, whether homœopathic or otherwise.

Persecution on the part of the old school was followed by tolerance—tolerance by respect. Every school, homœopathic, or call it what you will, contains earnest, capable, conscientious men, who would welcome any sincere overture toward consolidation, but we must not move hastily. We must not treat the matter of affiliation too lightly. It is a subject of the greatest importance, worthy of the most earnest consideration and careful discussion.

The dominant school offers us opportunities for affiliation, provided we merge our identity with theirs. In the evolution of the limerick, there is one that has always stood as a masterpiece in that particular field of literary effort, and apropos of this offer of consolidation, I think that I may without appearing to treat the subject too lightly, recall said limerick to your minds. Its application to the subject matter under discussion will be self-evident.

“ There was a young lady of Niger
Who smiled as she rode on the tiger,
They returned from the ride
With the lady inside
And the smile on the face of the tiger.”

But more seriously, if concessions are to be made, they should come from the older and stronger branch of the profession no less than from our end. No question regarding medical faith should be asked, provided one be legally qualified to practice medicine and is reputable and is willing to allow his brother doctors to practise as they will.

On the other hand, if the dominant school admit us to their councils, we on our part should be equally magnanimous and open the doors of our Society to physicians applying with the educational requirements.

I believe that it is entirely right and proper that in this address I dwell at some length upon Homœopathy. It is well that we refresh our minds from time to time with some of the more significant facts having to do

with its growth. It is well that in considering its recent great progress and the propriety and achievement which have finally been accorded it that we do not permit ourselves to forget what has been done in laying the solid foundation, upon which we are building to-day.

What is Homœopathy? This question has been answered a great many times. Homœopathy of to-day was once a brave advance guard, fighting its way through an enemy's country.

It is said that all "paths" lead to the grave—allopath, homœopath, osteopath, physchopath and Kneipp's dew sprinkled path; but it is the homœopath that prolongs the life path and robs the grave.

Homœopathy is a very safe and sure method of treating the sick in accordance with the law "*similia similibus curentur*:" let likes be treated by likes. It is a very definite method, in harmonious accord with a dictum of Nature. It seeks to work in harmony with certain unvarying natural laws. It is a reliable guide to the safe, speedy and permanent restoration to health of those in ill health.

The fear of medicine, first brought about by the danger of heavy dosing, has lately passed into a feeling that medicine is wholly useless, and the public believe these statements to be facts.

Drug therapeutics is a part of medicine, and the use of drugs finds increasing justification in the fact that the human organism contains organic material similar to the material contained in drugs within certain limits.

One difference between Homœopathy and the traditional school, is that the latter has waited for the individual to become sick, and experimented on him in that condition, whereas Homœopathy makes its experiments, called provings, upon the normal person and learns beforehand the power of drugs, and then diseases are met as they manifest themselves in different individuals.

To-day theories are adopted or disproved in the laboratory. The Homœopath has made laboratory and clinical tests of the rule of similars, and the results are on record.

We know it to be a law of nature by patient and exact experimentation and the result of scientific process of observation and generalization.

Dr. Richard C. Cabot says: "Homœopathy has a well defined law which has been established, like all laws, empirically, and is constantly and properly subjected to reversification through careful experiments."

Hippocrates wrote that some diseases can be treated best by contraries some by similars. Theophrastus said diseases are best cured by similars. Galen said that health is maintained by supplying similar with similar. Paracelsus, Bacon, Boyle and Campanella sought for specifics.

In 1813, Pinel, one of the most celebrated writers, said of the *Materia Medica* of his day: "The *Materia Medica* has been nothing but a confused heap of incongruous substances, possessing, for the most part, a doubtful efficiency, that it presents only a shapeless assemblage of incoherent ideas and of puerile, or at least of illusory observations."

In 1863, Dr. Paris said : "Passing to modern times, we should not be surprised at the very imperfect state of the *Materia Medica* as far as it depends upon what is commonly called experience."

It was Hahnemann who first brought order out of chaos and placed therapeutics on a scientific basis. His pioneer labors have influenced the older school. Their *Materia Medicas* are now filled with the provings of drugs upon the well.

Hahnemann discovered by experiment that each drug is a specific for a certain disease phenomena. The historian, Haeser, unfriendly as he is, declared that Hahnemann's ideas were perfectly new, peculiar, unheard of. He discovered the method, he elaborated it, he fortified it, he completed it, when he proved that a disease picture in an individual is best overcome by a medical remedy that is known to produce a similar disease picture in the healthy, provided the manifest cause of the natural disease is first removed.

Homœopathy is not restricted to drug giving, it applies to the use of any influence, mechanical, dietetic, electrical or psychic, which is capable of disturbing health.

Hippocrates, Celsus, Pliny, Aretæus, believed in a change of air and climate. Galen and Hahnemann sent their consumptives into the mountains.

Hippocrates dwelt on the importance of proper diet. Aretæus said that in food there is healing. Celsus said diet is sufficient in some diseases. Hahnemann regulated the diet of his patients.

Hydrotherapy was used long before Priesnitz thought of it. The Greeks used water for health and sickness to strengthen their nerves. Hippocrates prescribed all kinds of baths. Hahnemann and his followers employed hydrotherapeutics.

Turn from the precision and the permanency of the therapeutics of the Homœopathic school, to the uncertainty which characterizes the therapeutics of the old school.

What do Osler, Tyson and Anders teach? They confirm what Dr. F. Goodhart said in his annual address before the British Medical Association in 1901. He says : "Why do we give drugs? Often not because the disease demands them, but because the patient is not happy until he gets them; too often he is not happy then. They are sometimes given to hide our ignorance, I fear, or to make time, while we watch and wait . . . Diseases run in fashion and so do drugs. Their popularity is enormous, for in excess of their merits; and by and by they sink into the cold shade of neglect . . . They were rushed for more than they were worth, and they are now buried by later booms, such as animal extracts and antitoxine, and many of these will be buried too."

Dr. F. S. Shattuck of Harvard states the leading therapeutic principles as follows : 1. Do no harm. 2. Try to see as clearly as possible just why you give a drug, your purpose in giving it, whether as a specific, curative or a placebo. 3. As far as you can, give a drug uncombined.

4. In using an efficient drug, be as sure as you can of a good preparation, and then give it until something happens—either the desired effect or evidence appears that the limit of toleration has been reached.

In 1797 Hahnemann wrote: “Dare I confess that for years I have never prescribed anything but a single medicine at once, and have never repeated the dose until the action of the former ceased, always a simple, never a compound remedy! Dare I confess that in this manner I have been very successful and given satisfaction to my patients, and seen things which otherwise I never would have seen?”

If we are to take the good wherever we can find it, based on observation and experiment and open to verification, it seems strange that this method should be characterized as unscientific.

Homœopathy is a practical fact to be observed at the bedside.

1. It affords a practical guide in the treatment of the disease.
2. It aims at the eradication of disease whenever this is possible, rather than merely to afford palliative relief.
3. It economizes the vital powers by administering the minimum curative dose.
4. The Homœopath learns the properties of drugs by experimenting upon the healthy rather than upon the sick.

We hear a great deal about research in these days. There probably has never been a medical investigator who appreciated that science is to be advanced by research more than Hahnemann.

Haller was the first to suggest that if we wish to know the action of drugs, these drugs must be tested on the healthy body. Hahnemann made the tests and insisted that knowledge of the action of drugs could be obtained only by giving drugs to healthy people, and thus by the only rational method mastering their powers and properties. This debt alone should make the name of the man famous, who said: “When one has to do with an art, the end of which is the saving of human life, any neglect to make oneself thoroughly master of it is a crime.”

Drug pathogenesis must be mastered in the laboratory before drug prescription can be made in the clinic. The sick making powers of drugs, the effects produced on healthy human organisms, must be known before used intelligently in accordance with any therapeutic principle.

The curative action of drugs is a secondary and dependent issue. Drugs are disturbers of the peace of the economy to whomever administered. They produce similar effects on all people.

The ascertaining by reiterated experiment just what powers are inherent in each drug is the most important duty of every Homœopath.

Before the days of Hahnemann, the absurdity of judging the action of drugs from the effect produced by giving these drugs to sick people was recognized. The wonderful correspondence of the symptoms produced by drugs on the healthy body with the symptoms that patients complained of when ill caused Hahnemann to infer that drugs capable

of producing symptoms similar to those complained of by patients when ill, must remove such ailments.

For example, a certain quantity of belladonna will produce without much variation and great promptness, in a healthy person, active congestion, a marked action on the vascular system, a hot red skin, flushed face, glaring eyes, etc. These same symptoms will be produced if same amount of belladonna be given to a person who is ill; and if he happens to have above symptoms, they will be aggravated. Following it, however, the drug symptoms and disease symptoms for which the drug was given will disappear.

The earliest experience in Homœopathy revealed the necessity of reducing the dose of a drug to the minimum. "die middle macht ist gross."

It is a well known fact, that by one spermatozoon, this small cell, five hundred millions of which hardly fill the space of a cubic line, all the bodily and mental peculiarities will be inherited from the parent to the child, yes, even to the grand-child.

Can physics, chemistry and anatomy explain how this minute structure becomes the bearer of psychical impressions which dictate the mode of development to all future generations?

Among those who are ignorant of the principles of Homœopathy, the notion prevails that its doctrine is to give medicine in small doses. Experience has shown that massive doses of medicine mask symptoms. A delicate dosage, repeated, as care may direct will cure more diseases than mixtures that are weighed out by avoirdupois.

Homœopathy is not a lazy man's method of treating the sick. It is not an exclusive, sectarian method of treating the sick. It does not claim nor did its founder ever claim, that is the only method of treating the sick, but we hold it to be the only direct curative method of employing drugs for the relief of the sick.

Every therapeutic resource belongs to the homœopath and is intelligently studied and effectively employed by him. "A homœopathic physician is one who adds to his knowledge of medicine a special knowledge of homœopathic therapeutics, and practices according to the law of similars. All that pertains to the great field of medical learning is his, by tradition, by inheritance, by right."

Homœopathy is the administration of drugs to the sick, under a scientifically demonstrable law of nature. It is a mild and mighty system of treating diseased humanity. It is a truth that has been tried out in the fires of enmity, of ridicule, of long fierce and merciless opposition. It stands to-day tested and unshaken in public and private esteem and in honorable recognition.

Homœopathy has taught the value of the individual thought and judgment and helped to develop insight and reason by forcing a physician to decide for himself what is useful in drug therapeutics in every individual case.

It has taught liberalism in medicine ; it sounded the first note of revolt against the tyranny of tradition in medicine. It has alleviated the sufferings of millions of the sick and saved innumerable human lives by methods that never once have put a patient's life in peril.

Beginning with the fœtus in utero, the homœopathic remedy will aid the vital functions in a direct and rational manner, and the brilliant results of homœopathic medication, during the tender age of early life, carry with them the blessings of thousands of mothers, and everlasting satisfaction is given to the physician in the silent thanks of a smiling child, whose tissue cells have been enabled to build up an organism well equipped to develop into useful manhood and womanhood.

It is the duty of the dominant school to investigate the homœopathic method of drug therapeutics, and when its truth and practicability are established, to accept the proved facts and acknowledge homœopathy.

Osler said that of all the world's progress of the nineteenth century, nothing can compare with the decrease of human suffering ; and as this decrease of human suffering has been due to the milder, more scientific treatment of disease, we must acknowledge Hahnemann the greatest benefactor of the century.

"Around the name of Washington clusters the sentiment of liberty ; around the name of Lincoln clings the idea of emancipation ; around the name of Luther hovers the thought of reformation ; around the name of Hahnemann gathers the liberty of thought, emancipation from doubt, and reformation in medical practice."

How grand was the ancient idea of the true physician — "modest, pure, faithful at night, vigilant in the morn, courageous and discreet at all times, the preventer and curer of disease and pestilence."

Fellow-members of the Society, we have come together to-day, not alone for our own profit, but for the advancement of the science of medicine and the welfare of mankind.

Many of us have been faithful to our professional trust. When I think of the many lives of loved ones entrusted to our care, while the prayers of anxious parents are being offered for success when I remember the many sleepless nights, the many times the wearied body drags itself to the relief of the sick, the anxious moments when the angles of life and death seem hovering around, then do I realize the sacredness of our calling. If through our councils, researches and labours, we are enabled the better to relieve the suffering and prolong the lives of these loved ones then shall our meetings not be in vain.—*The North American Journal of Homœopathy*, August, 1911.

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PSYCHASTHENIA AND NEURASTHENIA.

By G. F. GOLDSBROUGH, M.D.,

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the London Homœopathic Hospital.*

The object of this lecture is to present a general introduction to the treatment of neurasthenia. The title "Psychasthenia and Neurasthenia" has been chosen because in all cases of neurasthenia there is some affection of the mental state and presumably, from several points of view the mental state is of importance in relation to the bodily state. This may be the case in relation to the patient's outlook on himself and his ailment, and as affording symptomatic indications for treatment, both hygienically and medically.

I do not propose to offer a systematic exposition of my subject after the text-book variety. In a post-graduate course, I take it this would be superseded by previous and perhaps wearisome familiarity, but I propose to present various aspects of this disorder, which in my opinion are of the utmost importance for consideration if the treatment is to be undertaken successfully.

The subject is a very wide one, and within the compass of an hour some severity of compression will certainly be required if the necessary features are to be presented comprehensively.

I shall endeavour to restrict myself to plain statements with as little illustrative quotation as possible or literary adornment.

First of all, it will be necessary for us to agree on the meaning of the designation Neurasthenia. Only of late years has the term come to possess a well-defined meaning, and even now confusion is often met with in a use of the term. It is not infrequently held as applying to the hereditary condition known as the "neurotic temperament," and perhaps nearly as often to an assumed inter-changeability of meaning with hysteria.

With regard to both these latter states, we may say at once that the subject of this lecture is not either of them, but that neurasthenia may occur in patients who are suffering from either. The neurotic patient may become neurasthenic. The subject of hysteria is always neurasthenia, but the neurasthenic patient may not be a hysteric, and in my experience usually is not, and he may not have inherited or acquired a neurotic temperament.

With these provisos, then, as to nomenclature I cannot do better than give you the description of neurasthenia of the late Dr. Saville, and say that we regard neurasthenia as "a general irritable weakness of the entire nervous system, characterized (when the brain is chiefly affected) by hypersensitiveness of the sensorium, loss of mental and bodily vigour, inaptitude for work, disturbed sleep and irritability of temper (and when the spinal cord is chiefly affected) by general muscular weakness, restlessness, nervousness and vague pains; and usually accompanied in both forms, by various phenomena referable to the vaso-motor and sympathetic systems." These terms are what we might call general physiological terms, and by way of complement to their meaning I may mention the symptoms, mostly subjective, of which the patient some thing or other complains as indicative of one or all of the central groups of the nervous system being affected: (1) Rapid fatigue; (2) headache; (3) vertigo, including dizziness and swaying; (4) insomnia or disturbed sleep; (5) sensitiveness and excitability; (6) restlessness; (7) tremor; (8) pains in the back or limbs, localized areas of the trunk or

representative areas of the cranial nerves; (9) hyperæsthesia; (10) mental symptoms, including timidity, usually depression, a great disposition to be anxious, especially about the symptoms, the "phobias" irritability, defective memory, inability to concentrate attention; (11) palpitation, pallor, flushing, shivering or sweating; (12) gastric symptoms; (13) phosphaturia.

Now, undoubtedly, you will agree that to undertake the treatment of a disorder so characterized, it would be highly important to discriminate at the beginning of the case any history and symptoms which might point to the conclusion that the patient had inherited or acquired the neurotic temperament or was the subject of hysteria. Such diagnosis would obviously have an important bearing on both prognosis and treatment.

The neurotic temperament appears as part of the habitual nervous tone which the patient exhibits and its existence is ascertained through a study of the history. The state known as hysteria usually continues with greater or less manifestation of its symptoms until middle life and afterwards, but an attack of neurasthenia might supervene at any time, and continue, or be cured and leave the other conditions pretty much as it found them.

I need not refer further to these in detail, but I want to assert at the beginning that in his treatment of neurasthenia the medical man will be greatly aided by a good general knowledge of personality or human nature. As you are all aware the state known as neurasthenia is believed not to possess a morbid anatomy. Symptoms pointing to actual inflammatory or degenerative change in any part of the nervous system lead to the diagnosis of other conditions than that of weakness and irritability alone. When it can be concluded that degenerative change has taken place, both the prognosis and treatment are very different. Now, evidently, a conclusion that no such change had taken place would be of the utmost importance in regard to the conviction on the part of the medical attendant as to the ultimate course and progress of the case and the possibilities of recovery. Not that the presence of auto-intoxication, or what are described

as purely functional morbid states of the brain, or spinal cord, vaso-motor or sympathetic systems, can ever be regarded as unimportant even from a deeply vital point of view. But in the absence of actual inflammatory or degenerative change, the occurrence of toxæmia or purely functional states would be presumably removeable. And in respect of his attitude to the patient, and his knowledge of personality or human nature generally, it is most important that the mind of the medical man should be "made up" on the point of his neurological diagnosis before he attempts to consider the question of treatment.

In the treatment of neurasthenia there is nothing which impresses a patient so strongly, as regards hopefulness or otherwise, and willingness to undergo courses of treatment, as a persuaded conviction on his part that his medical man "understands" him, and also not only that he "understands" him, but through his knowledge of disease and other cases of a similar kind, he is able to speak with certainty as to ultimate recovery.

For the impression of "understanding" also it is necessary the medical man should be on his guard against speaking too much to his patient and about his ailment. A usual mental symptom in neurasthenia is a conviction on the part of the patient that no one ever suffered before quite like the person now under observation. On the part of the medical man it is well to admit the bare truth of this statement, for after all it is true ultimately, inasmuch as that every one person must judge that every other has a consciousness of experience which in respect of both feeling and time at least is unique. Inasmuch, however, as uniqueness in respect of the experience of duration for the time being only, while time is passing, that individual feeling or consciousness can be regarded as wholly unique and only as occurrence in time, and that in all other respects we are to be regarded as more or less like one another, while the medical man keeps this single bare reservation in mind, he must not dwell, on the uniqueness of his patient's suffering, or expatiate upon it or even admit that such uniqueness can be true in any serious

sense, or other sense, except that it is true simply. But to his own mind, inasmuch as that reservation implies there is nothing in the experience of his patient which need not come within his own knowledge, the simple truth of it will give the medical man consciousness of conviction in dealing with his patient provided, of course, he can exclude organic disease of the nervous system, and his knowledge of human nature generally is good and his knowledge of disease and methods of treatment are up to date. On the basis of all this knowledge he must be prepared to give directions to the patient.

Now, in reference to a general knowledge of human nature, there is one chief feature which might be stated to be characteristic of the normal human being, or if not characteristic and habitual we might assume it ought to be, a deviation or departure from which, if not referable to environment, would be regarded as due to a state on the part of the patient of either psychasthenia or neurasthenia, or perhaps both, but which might not be sufficiently serve to lead to a request for medical advice, but when of sufficient severity is always a feature of neurasthenia. I refer to the general sense or feeling of well-being which enables us to be regularly and continually fulfilling the purposes of life with pleasure to ourselves and satisfaction to others, provided means and environment permit. If such fulfilment of purpose were not being attended with pleasure, provided other ailments could be excluded, inability to fulfil the purposes of life, such inability being attended with either weariness or pain, would be a general symptom of either psychasthenia or neurasthenia. I assume an agreement that the former state is at least an ideal state, which every one has experienced at some time of their lives, and wishes at all times to experience. However little further we may be able to define this general experience, we all at least think we know what it means or ought to mean for us, and we as medical men think we know what it ought to mean for our patients. A departure from this sense of well-being is, other ailments being excluded, the most general and fundamental characteristic of neurasthenia. I wish to suggest that on the basis of this assumption, if we keep it in

mind, other ailments excluded, it will afford us guide to our thought in studying and attempting to cope with the protean manifestations of mental and nervous weakness. Through a thorough study of the causes of this malady, we shall conclude that the patient is not well until he regains his sense of well-being in the broadest manner possible.

(1) REMARKS ON DIAGNOSIS. . .

Before proceeding to a review of causation I must, however, make a few remarks on diagnosis at the outset.

The diagnosis of neurasthenia is a little complicated by the fact that it need not be a primary affection, and it is a frequent accompaniment of other disorders, although seldom of other disorders of the nervous system. And stated very generally the whole ailment may be regarded simply as a functional variation of the normal, therefore a conclusive diagnosis is of the utmost importance, not merely from the point of view of treating the neurasthenia, but so that diseases of other organs than the nervous system shall not have been overlooked, and therefore causes of neurasthenia remain, also that it shall be decisively explained to and impressed on the patient that he has no organic disease of the nervous system. In this connection there will thus become of first and most importance the necessity, if possible, of conclusively eliminating organic disease, of the nervous system especially, but of course also of other organs. The time at my disposal, however, does not permit of going into detail on this aspect of my subject. I must refer you to the text-books for a discussion of the problems of the diagnosis of diseases of the nervous system generally, and of neurasthenia in particular, as distinguished from organic disease of the nervous system on the one hand and other bodily organs on the other.

I may, however, introduce a patient from the Ryland's Ward, suffering from traumatic spinal neurasthenia, to illustrate the differential diagnosis from organic disease, but the case illustrates, of course, only one phase of the subject.

I mention procedure in diagnosis as of first importance in your consideration of the whole subject, because once having

eliminated the presence of organic disease, and not before, we come to the threshold of our study of the etiology of neurasthenia.

(2) ETIOLOGY.

As we are agreed that sense of well-being should accompany a fulfilment of the purposes of life, the thought will readily occur to you that some people go through life without purpose, or that in many cases purposes are exaggerated as ideals without the possibility of fulfilling them. Also you may be prepared for the statement that such mental features of experience might predispose to both psychasthenic and neurasthenic states.

A discussion of the intricacies of problem of effect as from cause in such a connection would take us too long; but we must admit, I think, that mental states have frequently a reflective influence on bodily states, although for medical men the effect of bodily states on the mind would appear as of more importance.

The chief importance of mental states, as causes of neurasthenia, are indirect, their occurrence operating as determining forces in the environment. The etiology of neurasthenia would be divided by this reflection into two chief divisions, (a) the effect of environment, mental, social, physical, upon the nervous system, and (b) the effect of the organism upon its own nervous states.

Thus in considering causes in a given case it is necessary to take account of the life-history and heredity of the patient, his intellectual and social status and attainment, his previous habits and leading modes of thought and outlook on life. There is not the slightest doubt that in neurasthenia, and all the morbid subjectivity which usually accompanies it, even though some recent toxæmia or malnutrition, or a traumatism, or emotional shock may have appeared as the determining cause of an attack, the attack may be traceable to prolonged stress or anxiety in business, domestic infelicity, previous bad sexual habit, prolonged and too exclusive mental application, deficient fresh air and exercise, bad feeding, indulgence in tobacco, alcohol, or other narcotics, even to tea or coffee drinking. Thus the presence

of any of these factors, with the occurrence of toxæmia, malnutrition, traumatism or emotional shock may require to be duly weighed as causes in a particular case. Again, these factors may be regarded as external or environmental factors compared with disordered states of bodily systems or organs other than the nervous system as internal, anatomical or pathological causes. Although a greater weight of causation may attach to one set of factors rather than another it is seldom that to one defect, either in environment or organism, is the whole syndrome of condition attributable. It is well in all cases to classify causes in the manner suggested. We cannot undo a faulty heredity, frequently domestic infelicity has to be patiently endured. But bad habits can frequently be given up, and good habits formed. Hygienic rules can be prescribed and obeyed.

But it is when we come to a consideration of the influence of bodily systems or organs upon the nervous system that our special knowledge as medical men is called into requisition, and shall I say our difficulties begin? And perhaps foremost in a list which might be recited are affections of the alimentary system.

There is no doubt that auto-intoxication affecting nervous energy and tone can and frequently has resulted from oral sepsis, gastric catarrh or dilation, congestion, irregularity and inefficiency of the portal circulation and biliary secretions, and from prolonged constipation. On being consulted by a patient suffering from neurasthenia attention to these states may be a preliminary necessity in the treatment. But great care will be required in estimating the effect of such states as actual cause of the condition, and it must never be forgotten that violent measures of treatment always react upon an already enfeebled nervous state. Carious teeth should be either removed or filled; gingivitis may require local and constitutional treatment. But an operation on the teeth should be regarded as more serious than usual and the patient kept in bed for a few days subsequently.

With regard to gastric catarrh, dilatation, gastralgia or enteroptosis, it may be quite difficult to decide the question of"

post hoc or *propter hoc* in a given case. There is no doubt that the sequence may be either, and that usually, although not invariably, the patient exaggerates his symptoms whether the neurasthenia may have occurred as a result of his dyspepsia, or his dyspepsia resulted from a condition of neurasthenia.

The neurasthenic whose chief sufferings are in the alimentary sphere is usually miserable mentally, and he attaches extraordinary importance to small details of diet, of pain, of internal sensation, and of irregularities or otherwise in his daily bowel relief.

By a thorough examination of the digestive system it is necessary to decide as early as possible what has been the direction of causation in these cases, and if the decision is permissible, that the neurasthenia is primary and the gastric symptoms are secondary. Causes of toxæmia being eliminated and a suitable diet ordered, much help will be afforded to the patient by persistence on the part of the medical man that the actual symptoms of dyspepsia complained of are of purely secondary importance, and may be safely left large to Nature for their disappearance.

Passing from the alimentary to the circulatory system, a similar general remark would be applicable. As a condition calling for treatment primarily it is seldom indeed that neurasthenia has arisen from cardiac disease or anæmia. Rather have these states demanded attention primarily if loss or alteration of nervous tone has accompanied them. But while considering the question of causation of neurasthenia it may be well to state that the heart and circulation should at the outset receive a complete survey of their condition and if organic heart disease is found to be present, the importance of its actual state should be carefully estimated before any plan of treatment of the neurasthenia is begun.

There are several states of the heart which may occur as the result of neurasthenia, and each state may react strongly upon the general nervous tone. These are dilatation, reflex tachycardia and bradycardia from emotion, and reflex tachycardia or bradycardia from gastric disorder, such as dilatation of the stomach,

flatulence or hypochlorhydria. The signs of cardiac dilatation in neurasthenic patients are by no means constant and to gauge its importance examinations are needed at different times of different days and in different positions of the body.

The following case might illustrate this point. A gentleman, aged 46, consulted me in 1908 for insomnia. He had been suffering for two or three years, and complained of much depression, fear, and muscular weakness. He stated that he had had appendicitis, gastric catarrh, and weakness of the heart. He was particularly sensitive to thoughts about his health, and these, with any other depressing emotions, seemed completely to deprive him of sleep. And the less he slept the more frightened he became. I found a slight catarrhal condition of the stomach, the apex-beat of the heart was half an inch outside the nipple and the impulse weak accelerated. A short rest in bed with a good nurse and homœopathic remedies greatly improved the insomnia. The heart's action quieted, the dilatation improved and the patient left with his nurse for Swanage. His condition since has never been so serious, but I cite the case to state that when any external cause has occurred to prevent sleep, there has always been an immediate effect on the stomach and heart. On one occasion when the patient was consulting a local practitioner, the latter gave quite an unfavourable prognosis, which, however, was fortunately corrected by rest in bed, and the obtaining of sleep by *ignatia* and *chamomilla*. I was fortunate in seeing this patient only a fortnight ago. He has been doing his business all the winter, usually sleeping well. The apex-beat was in the nipple line, the heart's impulse much stronger than formerly, pulse 78. He had very little flatulence and a regular action of the bowels. No medicine was prescribed.

In my experience it is not often that cases of neurasthenia are met with the direct result of constipation. Usually other factors have been at work to induce both the inactive state of the bowels and the attendant nervous weakness, and chief among these are sedentary habits, want of interest or success in business and monotony of occupation. But the type of neurasthenia in which this sequence obtains is very common especially among the

out-patients of our Hospital, and they are difficult to treat unless the external causes and long acquired habits can be broken up. There is one other feature of neurasthenia, the result of disorder of the alimentary system, I wish to allude to, and that is the toxæmia of "biliousness" in which the patient suffers from vertigo, tinnitus aurium, headache frequently, depression and irritability of temper and often muscular inertia. He sleeps either too little or too much. In reference to this condition I should like to cite the following case in which although the diagnosis was not that of primary neurasthenia yet the nervous symptoms were those chiefly complained of.

Mrs. J. W., aged 46, came to see me in July, 1908, complaining of frequent slight attacks of vertigo, in one or two attacks of which she had fallen and thought she had momentarily lost consciousness.

I had known this lady all her married life. She had two children quite early, and suffered very severely from *post-partum* hæmorrhage and lacerated perineum. Further offspring had been normally prevented for fear of the consequences. She was always a "livery" subject, and also about five years ago had abscess in the right antrum of Highmore. While giving an anæsthetic for operation on this abscess, I discovered she had a slight systolic mitral bruit; she took chloroform rather badly. She is subject to "muscular rheumatism." Her condition on the present occasion was one of debility, depression and fear. She complained she could not enjoy life, was not "herself," could not receive visitors nor enter into social engagements. On any sudden emotion she ^{usually} would become slightly faint, the lips changing their normal colour to pale purple. Her hearing had become slightly dull, there was constant singing tinnitus, slight vertigo, with the occasional more severe attacks already mentioned. Menstruation was regular, the appetite fair, bowels inclined to be constipated, with rather light stools.

The systolic bruit was still present and the gall bladder could be distinctly felt and was rather resistant. The pulse was about 90, and the tension low, although no accurate estimate was made of the latter. I treated this patient with a Carlsbad diet and

medicines for some time with improvement, but she still had the vertigo occasionally, and did not regain her nervous tone.

The medicines employed were the mercurius and potassium iodide 8x, at first, followed by sodium salicylate 1x. In March, 1909, she had had no severe attacks of vertigo for some months, but the condition was still present in a milder degree. I now gave cholesterin 3x, and ordered a course of massage and Swedish exercises, with special attention to massage of the hypochondria and the abdomen, following which the improvement was much more marked, the vertigo and tinnitus entirely disappeared, strength and cheerfulness returned, and all bars to social enjoyment seemed to be removed. The patient was a little inclined to faint from emotional shock, for which I prescribed naja 6, and also occipital headache on lying down, which was relieved by glonoine 6.

Now, this patient's nervous state I regarded as distinctly secondary to disorder of the biliary secretion and defective circulation, and it is a type of many such cases where the physical signs of liver or heart disease are much less marked. The mental state of the majority of "liver" subjects is that of depression and hypochondriasis, and they demand the continual cheerfulness and patience and frequent reconsideration of their cases by the medical attendant.

Time will not permit of my dwelling on visceral proptosis, diseases of the pelvic organs in women, influenza, alcoholism, surgical shock, as producing well marked types of neurasthenia, neither can I say anything about exophthalmic goitre, except that the most rational interpretation of the pathology of the latter condition is that it is a form of neurasthenia affecting more especially the sympathetic system. On an already acquired unstable nervous system, acute affection of the eyes, ears, nose, mouth or throat may induce a state of irritable weakness of the general sensory spheres of those organs in which, when all signs of local trouble have disappeared, distress remains as almost permanent annoyance to the sufferer. A chronic nasal or aural catarrh locally treated and errors of refraction are chief causes in this direction. I suggest to ophthalmologists that in ordering

glasses for slight degrees of astigmatism in nervous patients, great care is needed in directing the use of glasses at the beginning. I have recently met with two very pronounced cases of neurasthenia in which the strain of getting used to the glasses had become a continual nightmare to the patient, and had induced a state of emotional and mental enfeeblement bordering on insanity. . .

I have a little to say on the irritable weakness induced by abnormal sexual habits or states of the reproductive organs. That these are a prolific cause of neurasthenia there can be no doubt. In reference to masturbation morbid self-consciousness and shyness with initial unwillingness to acknowledge the habit, yet when once acknowledged, sometimes too much readiness to refer to it are the most conspicuous features. This patient, when once aware of the perniciousness of the habit, usually attributes all his or her bodily symptoms to his having acquired it. This again is a mental symptom of his ailment, and the duty of the medical man is at once firmly and continuously to combat the morbid inference, to assert that the habit can and must be given up, and then to prescribe a course of occupation and to treat his patient symptomatically. In my opinion a good many single men and women suffer from neurasthenia from sexual abstinence. I never make the suggestion that irregular indulgence is a remedy for this, but we frequently have to deal with the conditions in which no indulgence can ever be held to be probable.

The most conspicuous features of irritable weakness in men, the result of this cause are undue self-consciousness and reserve, and other morbid sensations of the head, especially of the occiput, and depression. In women, pain in one or other or both the ovarian regions, constipation, mental irritability, restlessness, depression (she "must always be doing something") hurry, and disappointment with everything done, are the most conspicuous symptoms. The irritability is so intense as not infrequently to lead to the point of frenzy, and without doubt the insanity of the "wandering spinster" is often due to this cause. I may say here at once that the best remedy for these conditions is

"lasting friendship" with knowledge of, but without reference to, the sexual disability. With regard to sexual excess in men, emotional depression, lack of interest in the common work of life, defective memory and association, frequently thrilling pains in the back and limbs are the most common symptoms, there being usually a sensation of weakness and irritability about the sexual organs. In women irritability in the latter sphere is the most conspicuous symptom with frequent and profuse menstruation and debility accompanying the latter.

A consideration of the causation of neurasthenia from the point of view of the influence of other organs of the body on the nervous system will thus have pointed to the conclusion that the whole state of nervous debility is seldom if ever simple, and while not infrequently from some other external cause the illness may occur in attacks, such occurrence may frequently be judged to be part and parcel of the life-history of the patient and to have its root in mental and nervous habits acquired throughout the whole of life rather than in one short period. In reference to treatment this fact has to be borne in mind, the influence of bodily organs has to be carefully weighed and then any determining cause of a particular attack which can be ascertained, considered, with those other causes, as determining causes of an attack. As already suggested auto-toxæmia, malnutrition, overwork, anxiety, insomnia, emotional shock, traumatism, prolonged and severe neuralgia or other pain, fatigue or surgical shock, rank among the most conspicuous of these latter causes.

(3)—PRINCIPLES OF TREATMENT.

In consideration of treatment, the first aim will of course be directed to remove the cause. This goes without saying, and I need not dwell upon it, but our object now is, from a knowledge of causation, to deduce principles of treatment and from what has been said you will agree that this is by no means an easy task, as so many different factors may have been potent in inducing the morbid state.

In this ailment, more than any other I think, the treatment of the patient rather than proceeding upon any theory we may

adopt of, his disease is of paramount importance. As the subject is so large and my time very limited I cannot do more than offer a few fragmentary remarks on each possible measure of treatment, and it is better that this should be so as no routine or stereotyped plan is ever applicable.

(1) Let me say something about the treatment of the mental states. It will always be well for the physician to have made up his mind on the whole plan of treatment before he considers any possibility of influencing the mental state by exhortation, by argument, by sympathy, or severity. Before he begins to direct his patient his whole armamentarium should be up his sleeve. It will be best for him not to reveal his plan, however, but only put those measures in hand which are necessary until the next visit or consultation. And for success in a given case, if the patient has been under treatment before, something new will be required, something new that is not quickly exhausted. In this respect as regards medicines, selection from the homœopathic standpoint offers a much better field than the old system of allopathic drugs, more especially that the strength or attenuation of the medicines can be changed at will. If the medical man is certain that recovery is possible he should let the mind of the patient be thoroughly possessed of this idea, and it may be necessary to reiterate it in season and out of season.

With every new plan of treatment to be adopted there is usually some objection raised by the patient, and in most cases first measures are always stated to aggravate. This arises first from the morbid mental condition as a symptom of the disease dominating the patient's consciousness, and secondly from the psychological principle that through reflexion no person can judge accurately of his feelings and thoughts as being truly representative of bodily states. The two orders of phenomena, subjective feelings and thoughts and objective bodily conditions, are totally different, and the former are never truly representative of the latter. Of course this fact does not hinder the medical man taking account of everything the patient has to say about himself, and weighing his representations of his bodily condi-

tions, and of course the latter should never be directly contradicted, although sometimes they may be partially explained away. Morbid representation of symptoms is almost always itself a symptom of neurasthenia, although in exceptional instances this is not the case.

With these general remarks we may proceed to the first important principle of mental treatment, namely, whether to encourage the patient to use his mind or to rest it.

A decision on this point will arise from noting the fact whether the effort of attention in various occupations is followed by subsequent exhaustion. And here the element of time is of importance. On account of the sensations induced in the head by effort of thought, many patients are afraid to make the effort, whereas it is quite possible that they might be considerably the better for it after a little while. On the other hand, in patients whose occupations are intellectual and strenuous, as a rule, complete rest of attention or passiveness is more recuperative. In cases where memory and the power of association have really failed, it is best not to encourage mental effort at all, but to wait for signs of natural recovery.

Symptoms of the imagination and morbid thinking cannot be combated by any argument aimed directly, but only through, first, confidence on the part of the patient in the medical attendant, and secondly, an immediate appeal to his emotional or voluntary control and these latter are of great importance in reference to depression or excitement, or irritability of temper.

If you can gain the confidence of a neurasthenic patient you can do a great deal with and for him. He will very likely bear being told that he is irritable and perhaps be able to correct it. But you may gain his confidence at a cost, because he will probably worry you a good deal with his mental and bodily changes and states and every new symptom will bear the stamp of his habitual morbid representation.

(2) The next point of importance is a consideration of whether special means should be adopted for the induction of sleep. I need hardly say that every one agrees that natural

sleep should be obtained if possible. And in this respect homœopathic medicines are far preferable to any resort to a hypnotic. In belladonna, chamomilla, coffea, hyoscyamus, gelsemium, ignatia, aconite, we have a list of medicines, one of which chosen according to the indications discoverable in the materia medica, will be sure to be successful in quite recent cases of insomnia, resulting from neurasthenia. But unfortunately quite recent cases are seldom seen. I think gathered round the question of the patient's sleep, a consideration of this problem will most usually determine largely whether rest in bed in the day is required, whether special companionship is necessary by day or night, whether special nourishment by day or night, and whether hypnotics are called for or whether reliance can be placed on homœopathic medicines alone.

A great deal will depend whether the present is the first attack, its severity and duration, and whether the patient is a chronic sufferer from insomnia, and also what he considers his normal amount of sleep. If the attack is recent and the insomnia acute, if the patient must be alone at night, it may be best to give a hypnotic for one or two nights and then rely on other measures afterwards. The best hypnotics in my opinion are trional in 10 or 15 gr. doses, or veronal in 8 or 10 gr. doses or bromide of potassium in 10 or 15 gr. doses.

But if the patient is in a nursing home or has a sensible and well-balanced relative or friend to be with him at night he will do much better without hypnotics, reliance being placed on nourishment, or suggestion, and the soothing influences round him, with the appropriate homœopathic remedy. I may say here I have no wide experience of hypnotic suggestion to offer for the treatment of this and other neurasthenic states; but active voluntary suggestion I constantly employ, as I dare say we all do. If it can be stated to a patient there is no intrinsic reason why he should not sleep, sleep can often be induced voluntarily by simply keeping quiet and thinking of the word sleep. But, of course, if there are other conditions operating to prevent, these must be corrected before this end can be attained.

(3) Next we regards the treatment of the patient generally. I have said the condition of the sleep will determine many things in the treatment, but it will not determine always whether rest in bed is required or that a rest cure should be ordered, or that a patient should travel or go to a "hydro," or a seaside watering place, or on the Continent, or for a voyage, or otherwise. Or whether he should have an occupation prescribed for him, or be told to go and shake off his ailment by a hard strenuous tackle of the facts of life. But all these are points in the plan up the sleeve and in every case their advisability should be considered.

I will cite four cases in point where the most of these contingencies presented themselves at one time or another. F. C., gentleman, aged 45, secretary to a philanthropic society, came to me in September, 1908, complaining of nervous exhaustion following an attack of influenza in the February previously. He had been to Worthing, Bexhill, and other places without benefit. He had also taken a voyage to America in the hottest time of the year. His symptoms were of the usual order, so that I need not describe them. His sleep was disturbed by dreams, but he did not have actual insomnia. He improved under anacardium, picric acid, ignatia, and hyoscyamus at night. Towards the end of the year he asked me if I would advise his going to Switzerland to the house of a medical man there. I could raise no objection, so he went. I learned that there part of the treatment was a daily douche of cold water up and down the spine for a few minutes and a certain length of time in sawing wood in the garden every day. These measures were of the utmost benefit to the man. He returned after some weeks able to resume the duties of his occupation.

J. W., aged 35 in 1909, had suffered for several years from a severe form of gastric neurasthenia. He was a man of independent means and had worked hard to make his fortune with the result that now he could not enjoy it. He was morbidly anxious about every feeling in his epigastrium and abdomen, his pulse was very feeble and accelerated and the bowels were irregular and unsatisfactory. He could walk a mile or two without much exhaustion, but was very tired indoors and made no mental effort

beyond reading fiction. He had so reduced the quality and quantity of food to avoid abdominal discomfort, that loss of weight and severe malnutrition was the result. I could detect nothing organically wrong with either the heart or stomach, but the circulation was extremely poor, the hands and feet being blue and cold. My plan of treatment for this patient was an adequate diet, and suggestion. The principle of diet was to give the stomach sufficient to do on one class of food to digest at a time, that is with proteid food only, or giving the slightest amount of carbohydrate and *vice versa*. I endeavoured to impress on the patient that he was leading a useless, purposeless life, and that even though he was suffering, it would be better for him to use his brain to some good purpose. I could scarcely get him to take a dose of medicine, so impressed was he that his ailment depended on his adopting a right diet. The treatment adopted improved him considerably, so much so that in the course of a few months it appeared that some fresh intellectual interest would probably complete the cure. Accordingly he took a voyage to Japan by the Indian Ocean route on the outward journey and the trans-Siberian route on the homeward. On his return he was practically well. He said he could not eat everything, but he suffered no pain, he was stronger and the circulation had completely regained a normal tone.

Mr. M., aged 45, an American from San Francisco, came to me about two months ago and said, "Doctor, I suffer from gastric neurasthenia and I am over in Europe to try everything that is possible to get it cured. What can you do for me?" On inquiry I found that the man had been through every form of treatment described in books except that he had not tried homoeopathic medicines. On examination I could not detect gastric dilatation, although the tongue was coated and he had a number of symptoms pointing to weak digestion, but with the exception of the gastric symptoms he had not much to complain of and his energy was not greatly impaired.

I prescribed anacardium 30 with certain benefit, but on the next visit the patient said, "I am going to Stockholm to try Swedish movements. Do you know anything about them?"

Of course I answered in the affirmative and undertook to prescribe homœopathically for him while there; and he is gone, I believe, but I consider his pursuit of treatments is part of the irritable restlessness of his neurasthenia, and for a patient of this kind, who evidently had plenty of means and was not obliged to work, I confess none of the plans I have presented to you appear quite to meet his case.

The following case is an illustration of one of the "phobias," claustrophobia, or fear of a closed place.

T. M., commercial traveller, aged 49, consulted me on October 14, 1910. He said his nerves had gone wrong, this time since July, and it usually happened in hot weather. He could not bear to be in the underground electric railway. Whenever he went down he would be seized with panic and say to himself, "What shall I do? I must get out." He would be better occasionally. The only other symptoms were dull pains in the temples or vertex and a good deal of flatulence. There was no evidence of cardiac or gastric dilatation. The man was very keen intellectually, taking much interest in mechanical devices, mathematics and anthropological curiosities. I explained to him that his case should be amenable to autosuggestion, that when the feeling came on, if he could only have courage to sit still and remember that the feeling could pass off even where he was, it would pass. I gave him some *anacardium 3x*. I have not noted on what special indication. He went away determined to follow my suggestion. On the 21st he was decidedly better and hopeful of soon conquering. He had not had to get out of the Tube except at his journey's end. On the 25th he had continued the medicine, which was evidently a mistake as he thought he was worse with it, and was very depressed, although he had not given in to the feeling. I now gave him *aurum met. 3*. On the 30th I was asked to see him at home. He had had a most unpleasant experience in the City, having been taken with sudden faintness and collapse so that a doctor was called to see him. I found weak action of the heart with reduplication of first sound at the apex, but the apex beat in the normal situation. Has a good deal of flatulence.

He now stayed in bed for a week, being attended by his highly intelligent, sensible, well-balanced wife, who carried out my directions to the letter. He soon began to recover. I gave him strophanthus for a few days and then phosphoric acid and he resumed business on November 9. The claustrophobia was conquered, but this had been at the cost to the patient's nervous system otherwise, which required this rest in bed. I saw him on April 9 this year. There had been no return and he had kept to business all the winter. I attributed the attack of faintness to the effort the patient made to conquer his fear.

I believe that in all recent cases of neurasthenia, if it has not already been taken, rest in bed, or a rest, is advisable, as soon as it is practicable. Even if the rest taken does not result in a "cure," the period of rest gives the patient an opportunity for reflection, for understanding his own ailment better, and prepares him for the next advice his medical attendant feels called upon to offer him. And on the part of the medical man, for his patient to be resting gives opportunity for observation, for understanding idiosyncrasies, and peculiarities, and for watching the effect of other measures of treatment such as dieting, massage, electricity, and medicines. The length of time which has elapsed since the publication of the first edition of Weir Mitchell's little book on the subject of the "rest cure" has given opportunity for estimating the value of this treatment, and for gauging the relative influence of the factors most potent in it. Weir Mitchell's own basis for instituting the cure consisted in primarily meeting the necessity for feeding in these cases, and for securing the accompaniments which render forced feeding possible and advantageous. I need scarcely remark that these accompaniments are, first, rest and contentment of mind, regularity in the administration of food both as to its quality and quantity, and passive exercise induced by massage and movements effected by the operator, accompanied or otherwise by resistance on the part of the patient. Thus the initial feature of the rest cure consists in altering the environment of the patient, using this term in its widest sense, and placing him in an environment more adapted for his recovery.

I believe one of the most potent factors in the induced environment is the personality of the people round the patient and the relief from too anxious and often fussy and irritating relatives, the sense of companionship and hopefulness which the intelligence, real sympathy, and encouragement the occupation of doctor and nurse would naturally impart. The length of time a rest cure should be enjoyed would depend largely on the history of the case, on the observed peculiarities of the patient while under treatment and the progress he makes especially with regard to sleep, the taking of nourishment, improved mental and physical tone, and diminished sensibility to external impressions.

Under the heading of the rest cure it is most fitting to consider questions of diet, massage and exercise, open air, and the use of light and electricity. I must forbear entering into much detail on these points, and a decision on their employment will depend on the causation and history of the case. They all merit consideration, especially the modern use of the sun and light baths, and the high-frequency current in electricity. Except in cases of muscular weakness in hysteria where faradism is of the utmost benefit, the local application of electricity is usually to be avoided, but where it can be afforded the high-frequency current is an excellent tonic.

(4) As an advance upon a rest cure it will become necessary to decide what amount of fresh air and exercise the patient can take immediately. In an elaborate paper on Neurasthenia by Dr. Burford and two others of our colleagues, you will find advocated the air of the high altitudes of the Swiss mountains as conducive to prompt recovery, and the authors of that paper contend that such treatment is an illustration of the principle of similars.

I need not enter upon an argument on this point, but suggest that various altitudes may be considered, from the high ground round London, the hills at Church-Stretton and Malvern, to the salubrious air of Braemar, before you send your patient to Switzerland, for it is quite possible that residence at from 500 to 1,000 ft. may be very beneficial. And it would be scarcely

fitting to send a patient straight from "resting" to a place where the conditions are so markedly different as would be a Swiss mountain 3,000 or 4,000 ft. or more above sea-level.

Then again a most important question has to be decided, whether the patient must rest out of doors, or whether he may indulge in a little climbing or other form of exercise. Also whether he should stay at one place or travel about. The state of the general nervous tone and condition of the heart will probably decide one point, and the ability to sleep, the degree of mental depression or necessity for intellectual interest the other. Under this head also would fall to be considered the employment of Swedish exercises or movements. These are especially valuable where it is not possible for the patient to go to a high altitude or to engage in any other form of exercise.

The employment of these exercises must be directed by the state of the circulations, and other organs of the body, as well as by the capacity of the muscular system to sustain fatigue without loss of tone.

With regard to all questions of rest and exercise, mental or bodily occupation, regularity is important, and the patient should never be left in doubt as to the directions of his medical attendant on these important points.

(5) Now last I come to the question of homœopathic medicines applicable in neurasthenia. You will have gathered that treatment by medicine is not the first measure to be thought of, and it may be the last, but if it is last this is because a fulfilment of the conditions provided for by other measures is essential to give medicines a chance to have a good effect. The adoption of other measures amounts to, in a very large extent, the removing causes, and we are on sound homœopathic lines in removing causes before giving remedies.

On the subject of medicines you may read a very practical paper by Dr. John Ellis, of Liverpool, and from the homœopathic point of view Dr. Burford's paper is a good supplement to Dr. Ellis's. Now you will have noticed that the leading symptoms of neurasthenia are general symptoms of the patient, and it would naturally be thought that such symptoms would

be important indications for the selection of medicines, and such indeed is the case. But the number of drugs which produce these symptoms, in anything like their totality, is not large, so that the list to select from is usually limited. But I must of course guard myself from suggesting that you can ever prescribe for neurasthenia as a disease, yet you must always do so from the patient's point of view, and a keeping of this principle in mind may frequently lead you away from the list of medicines given to perhaps some of the least likely for the named condition to be found in the *materia medica*.

The list of medicines given by Dr. Ellis is as follows:—*acidum oxalicum*, *acidum picricum*, *acidum phosphoricum*, the salts of iron and zincum. These are his chief remedies. As subordinate ones for the different phases of the malady he mentions *actea*, *anacardium*, *argentum nitricum*, *cocculus*, *cactus* (if I remember rightly) and *ignatia*. To this list I should like to add three others I have found especially serviceable, namely, *china*, *kali phosphoricum*, *phosphorus* itself, and *petroleum*. But it is scarcely fair to begin enumerating remedies, you will be asking for the indications for each of them. These I must not attempt, to give in detail. I must not, however, omit to mention again those I have already alluded to for *insomnia*: *belladonna*, *chamomilla*, *coffea*, *hyoscyamus*, *ignatia*, *gelsemium*, *aconite*, and to add to both lists, *ambergris*, *bovista*, *nux vomica*, *sepia*, *lycopodium*, *spigelia* and *sulphur*.

I may be pardoned I hope for leaving out any single drug which some of my audience may have used with benefit.

With regard to indications I must ask you individually in each case to find out these from the *materia medica*, and I will conclude with a few practical points I have found of importance in practice.

Acidum Oxalicum.—I can confirm Dr. Ellis's experience as to the value of this medicine in certain forms of gastric and spinal neurasthenia. I use the 3rd or 6th centesimal dilution.

Acidum Picricum is of the greatest value in neurasthenia following influenza, especially where the feeling of exhaustion is intense and general pains are complained of in the back and

limbs. I have found the 12th and 30th dilutions of most service. In my opinion this medicine should never be given below the 6th, and seldom in that.

Acidum Phosphoricum is of much service in the sexual debility of men where emissions are frequent. I have given the 1x dilution with the greatest benefit. But sometimes in this condition *acidum phosphoricum* will give way to *china*, in the pure tincture, and it may be best sometimes to give one medicine and sometimes the other.

I can confirm Dr. Ellis's remarks as to the use of *acidum phosphoricum* in other states. In these latter the 6th dilution is probably the best.

As you are aware, the preparation called Sanatogen contains phosphoric acid as its active ingredient, and it may be recommended where this medicine is strongly indicated. In this connection also the work of Dr. Frank Watkins on acidity of the urine and phosphoric acid should be consulted.

Anacardium is of most service in the neurasthenia following overstudy, but states of dullness are indications for it rather than states of excitement. States of excitement call for *belladonna* and *chamomilla* chiefly. I have not had much experience with *anacardium* in gastric neurasthenia, but such as I have, confirms that of others.

Ambergris in the 6th dilution I have found of much service in the pressive headache of women suffering from anxiety and depression.

Aurum Metallicum I ought to mention as being less useful in neurasthenia than in psychasthenia where the disposition to suicide is strong.

Ignatia is frequently regarded as predominantly a woman's medicine, but I can assure you this is quite a mistake where men patients are suffering in soul from the effects of misfortune, domestic grief or disappointment, or even from the emotional effect of having an illness come upon them. *Ignatia* 3 is their remedy, not continued but given whenever the emotional symptoms inclined to predominate.

Kali phosphoricum I have found specially valuable also in the neurasthenia following influenza. In this it compares with

picric acid, but it is valuable in such states following pelvic lesions in women. In the latter condition it compares with argentum nitricum. A particular indication for kali phos. is a sensation of emptiness and sinking in the epigastrium and abdomen.

Petroleum I have found useful in gastric and abdominal neurasthenia, and the use of Angier's Petroleum Emulsion is to be recommended in these states when accompanied by emaciation or loss of weight.

With regard to the administration of medicines my usual custom is to give the remedy indicated by the whole state twice daily for a week or so at a time, and if occasion requires where a special symptom is annoying, such as headache or sleeplessness, order a single dose of another medicine to be taken at night or occasionally.

I give these points as having occurred in my experience extending now over thirty-four years of prescribing homœopathically. I do not wish to suggest the exclusion of others, or other methods of prescribing, but only to confirm or supplement the labours of colleagues who have preceded me.—The *British Homœopathic Journal*, July and September, 1911.

CLINICAL RECORD.

Cases.

BY A. S. ALEXANDER, M.D., C.M.

Case 4.—Mrs. V., aged 50, seen on June 28, 1910. This case also illustrates the value of treatment directed to the drainage of the accessory sinuses for the relief of somewhat remote effects.

The patient asked for advice on account of severe headaches over the forehead and vertex, and occurring about once a fortnight. They had troubled her for some years, and no means of relief had yet been successful. One remarkable circumstance which she had observed, was that after the attack had continued for some hours, a collection of watery liquid took place at the back of the throat, after which the pain soon passed away. She also generally suffered from more or less catarrh in that region.

Examination on the occasion of her visit did not reveal more than some nasal and post-nasal catarrh, but from the sequence of events described, it seemed probable that some degree of purulent sphenoidal sinusitis existed, and that the pus gradually collecting in the sinus, or sinuses, set up the headache, its periodical discharge giving relief. On this ground, the patient was directed to insert an argyrol plug, in the manner already described, into the middle nasal meatus of each naris on alternate days, douching thereafter with glycothymoline. For the nasal condition kali bich. 3x was prescribed.

The lady was seen again in about a month, when she reported that there had been no recurrence whatever of the headaches, and she felt immensely relieved.

On September 23, she was still practically free from her old trouble, though there was a slight discharge at times. At her last visit on December 7, when she came to be tested for reading glasses, she stated that the improvement was maintained, so that the case may probably be regarded as cured. It may be added that the patient had no error of refraction, so that the headaches were not due to an ocular defect.

Case 5.—Miss P. aged 19, seen on September 28, 1906. The patient was in training as a public singer, and having lost her voice for some weeks, was in much anxiety about it. After bathing she took cold, became partially of deaf for some time, and then the voice became so hoarse that she could no longer sing. There was no cough, and when seen by me her voice sounded tolerably clear in speaking, but directly she attempted to sing about D, the note failed and cracked, and no note was quite clear. Usually she could take A easily.

Examination of the pharynx and larynx showed general inflammation of the fauces, and of the respiratory mucus membranes generally down to the arytenoids and ventricular bands, while the true cords failed to approximate completely in the middle line

during phonation. The condition was evidently one of pharyngeal and laryngeal catarrh, with some degree of paresis of the vocal cords. Causticum 3x was prescribed, with rest for the voice and no attempt at singing.

October 12.—Fauces still red and inflamed, but laryngeal structures much less so. The voice is now clearer, the patient, on being tested, sings up to F easily. Causticum was continued, and she was told to gargle with normal saline.

October 31.—Improvement continues and function of vocal cords found on laryngoscopic inspection to be much more complete.

The aryteno-epiglottic folds were somewhat red and turgid. Spongia 3x was now substituted for causticum.

November 15.—About the same. Has slight cough from tickling in the throat. Voice clear and resonant up to F, but not above that note.

December 6.—Says that the voice is always better on clear days, but worse when the weather is damp, and also better at night than in the morning. She also describes the throat as feeling nervous, and she is afraid of cracking on high notes. She can take G, but hesitates slightly on beginning it. Causticum 6 was prescribed.

December 17.—A great improvement followed the last medicine. She can now sustain A., and is practically well.

Causticum is a remedy that has always served me well in partial aphonia, particularly when there is any degree of paresis of the vocal cords. In the latter respect, its action seems analogous to its well-known effect on the rectus muscles of the eye and also on the portio mollis of the 7th cranial in peripheral facial paralysis. The particular symptom that has generally determined its selection in relation to the throat is the tendency for the voice to crack in the higher registers. In such cases I have rarely, if ever, known it fail to cure. I generally give it in the 6th dilution, and probably the case narrated might have done better, had that strength been given from the outset.

Case 6.—W. H. G., aged 53, seen on September 7, 1910. The patient stated that he had suffered from hoarseness of voice for some two years, and recently, when away for a holiday in the West of England, had become rapidly worse. He had had a chill with rise of temperature to 103° F. at night. The attack was attended by aggravation of the hoarseness to partial aphonia, and constant cough from irritation in the larynx. When seen, his temperature was normal, though he still complained of perspiration at night, the voice was very rough and indistinct, and there was a frequent hacking cough. There was no enlargement of glands, and the lungs were apparently normal.

Laryngoscopic examination revealed the following condition: The epiglottis was unusually long and highly inflamed. Arytenoids also inflamed, but not oedematous. In the interarytenoid space,

there was a greyish-yellow patch of ulceration, apparently superficial, and smaller patches on both ventricular bands.

Questioned as to family history, the patient stated that he had never heard of malignant disease in any of his relations, but that there had been consumption in various members on both sides.

The question of diagnosis was doubtful. The laryngeal appearances were not typical of tuberculosis, where the arytenoid cartilages are generally pale and cedematous, and pyriform in shape. The greyish-yellow patches might have been due to either malignant or tubercular infection, though the interarytenoid ulceration rather favoured the latter. The family history likewise lent colour to the tubercular theory, and moreover, had the case been malignant, one would have expected, after a duration of some two years, to have found some enlargement of the submaxillary or cervical glands.

It may be added that while in the West of England, the patient had been seen by Dr. C. O. Bodman, who had applied Moro's test for tuberculosis, but with a negative result. This and other similar tests are, however, considered by many to be quite unreliable.

Treatment was based partly on the general symptom picture, and partly on the supposition that the case might be one of early tuberculosis. Some hold that laryngeal phthisis never exists without a corresponding pulmonary lesion. Such an opinion is open to grave doubt, and I have before pointed out that a general tubercular infection may have its starting-point in the larynx. The patient was advised to resume his holiday, from which he had returned in a panic, to live in the open air, feed well, and give up smoking entirely, the latter ordinance being regarded by him as a great hardship. He was also asked to take kali bich. 30 t.d. with a dose of tuberculin 30, once a week.

On October 11, he returned from a month's holiday in the Channel Islands, and reported himself as feeling very much better. The cough had decreased and there was no expectoration. (He had been asked to send a specimen of sputum for microscopical examination, but had not done so.) The voice was certainly clearer, but patient stated that it varied. There had been no rise of temperature during his absence, and the night sweats had stopped. Weight was 12 st., and unchanged since his last visit.

The appearance of the larynx had improved greatly, the inflammation having subsided, and the only ulceration remaining being confined to a small patch on the right ventricular band. He had carried out all instructions faithfully, except with regard to smoking, having indulged in three cigarettes a day. A month later—November 9—the improvement was found to be maintained, though the voice was still a little rough, and was more so when he felt tired.

A very small greyish-white point could still be seen in the same situation as at his last visit. It appears to be more like cicatricial tissue than anything else, and otherwise the larynx appeared to be healthy.—*The British Homœopathic Journal*, June, 1911.

Cleanings from Contemporary Literature.**DISCUSSION ON DISEASE CARRIERS.**

AT THE BRITISH MEDICAL ASSOCIATION.

Opening Papers.

I.—DAVID SAMUEL DAVIES, M.D., D.P.H.,

Medical Officer of Health, Bristol, Urban District and Port.

TYPHOID FEVER AND DIPHTHERIA.

Recognition of the establishment of a chronic condition in certain cases of the acute specific fevers which were formerly considered to run a definitely limited course, has introduced administrative difficulties of a new kind, which are typically presented in the case of the chronic typhoid carrier.

On the one hand, the mere fact that certain patients after apparent recovery still excrete bacilli continuously or intermittently, and from time to time prove "effective" agents in the causation of typhoid outbreaks, would appear to call for as close supervision in civil life as has already been applied with conspicuous success in the case of the army. On the other hand, the infrequency of the condition, further complicated by its intermittence, has caused some to question whether it is worth while to be at so much pains for so little result; while others consider that the onerous and highly specialized nature of the necessary research, the prolonged detention in hospital of patients apparently well, and the lack of restrictive powers over such patients, render administrative control, however desirable, a mere counsel of perfection.

TYPHOID CARRIERS.*Infrequency of the Condition.*

It has to be admitted that the number of typhoid convalescents who are likely, from the nature of their occupation as cooks, dairymaids, etc., to prove "effective" carriers is quite small. In India some 1,000 cases of typhoid fever occur annually amongst British troops; of these, about 200 end fatally and about 50 are invalided to England; of the 750 left in India it may be assumed that 23 become "carriers." But as only 3 or 4 per cent. of soldiers have to do with the cooking or preparation of food for their comrades, not more than one or two "carriers" can be looked for as likely to be a source of contamination of food supplies in the cookhouses. Yet, so important is this source of infection considered, that convalescent depôts at Naini Tal and at Wellington have been established, at which all convalescents are kept under rigid observation, and the fact that the admissions from typhoid fever from all stations in 1903 which send convalescents to Naini Tal show a reduction of 9 per cent.

on the figures for 1907, while the remaining stations show an increase of 26.6 per cent., certainly suggests that the work has proved beneficial.

The argument as to the small number of "effective" carriers likely to be detected is faulty, for the fundamental basis of preventive epidemiology is to detect and deal with the earliest case, rather than to exploit elaborate measures of stamping out. It is more economical, too, both in life and money.

Intermittence and Prolonged Detention in Hospital.

The intermittence of the condition makes prolonged observation necessary in order to achieve certainty, and the army rule is that no convalescent patient is sent back to his station within four months of the cessation of his fever. By this time a fairly accurate idea can be formed as to which patients will develop into carriers, but in civil life it would be impossible to enforce hospital detention for so long a period. The present almost universal system in English fever hospitals is to discharge typhoid fever convalescents when, from the clinical standpoint they appear to be fit for discharge; where a time limit is imposed it varies from three to six weeks after the re-establishment of normal temperature. This appears to be insufficient—the army standard is impracticable in civil life; it becomes necessary to consider a working mean.

It has been found practicable in Brighton to keep patients under experimental observation during the convalescent stage, with normal temperature, over twelve weeks; 27 patients were dealt with; in 12 of the 14 cases in which a positive result was obtained during the fourth, fifth, sixth, and seventh weeks of convalescence, later examination showed the disappearance of *B. typhosus* from the faeces. These figures, so far as they go, show that in typhoid fever the faeces are infective in about two-thirds of the cases during the fourth to the seventh week of convalescence, and that after the seventh week the risk of infectivity is small.

Necessity for Early Determination of the Condition.

The common experience of the extreme difficulty in curing a typhoid carrier whose condition has become established points to the necessity for early detection so as to admit of the prompt application of medical measures.

Dr. Mathew Hay, of Aberdeen, reports that in every case of typhoid fever treated in the Aberdeen City Hospitals during 1909, the patient was not discharged from hospital until the urine and stools were found to be free from the bacillus after two successive examinations. In two cases in which the bacilli continued in the stools for eight and ten weeks respectively, Dr. Hay made use of a combination of saline cathartic with a disinfectant so as to secure a large secretory and excretory flow from the walls of the intestines, and also from the liver and gall bladder, with the object of washing the bacilli into the intestine, where they could be acted on by the disinfectant; this was apparently successful.

Dr. Hay emphasizes the important point that if the treatment is to prove effective, it should be commenced as soon as the case is seen to be drifting into the condition of a chronic carrier, and before the patient is released from isolation. He repeats the caution that it is useless to wait until the bacilli have been lodged for many months or years in the gall bladder, and have in part become embedded in its walls or in gall stones. Josef Kock has previously pointed out the hopeless condition that must result when the bacilli in the gall bladder, urinary passages, or intestinal wall become surrounded by areas of dead tissue through which no curative agent can penetrate, and the importance of detecting the case before these chronic changes have come about. An example of this difficulty has been for two years under treatment in Ham Green City Hospital, Bristol.

Case No. 3, Urinary Type.—Urotropin has been tried; autogenous vaccines were given for five months; no treatment availed, though there was one period of intermission lasting nine months, after which the bacilli reappeared. Finally, the *B. typhosus* having been localized in the right kidney, surgical exploration of the kidney revealed the presence of small calculi surrounded by minute abscesses; from these abscesses *B. typhosus* was obtained in pure culture. The removal of the calculi and abscesses was followed by some improvement in the condition, but absolute cure has not yet been attained.

*Divided Responsibility, and Provision of Adequate Means
for Research.*

Some difficulties may occur under these heads. If cases of typhoid fever are unnursed in the general hospitals, there may be some disinclination amongst the medical staff to go beyond routine clinical treatment, on the ground that the "carrier" condition is the concern of preventive rather than curative medicine. If they can be dissociated, this might be so; but the most effective reply is that adopted by Dr. Armstrong, of Newcastle-on-Tyne, who insists on the necessity for isolation of all typhoid patients in a fever hospital. Again, there are not always available, either in general or fever hospitals, adequate facilities for the accurate determination of the presence of *B. typhosus* in the dejecta. It is highly desirable that every district should have, as appears to be the case in Germany, the services of a competent pathological laboratory and its staff available.

State Interference.

Up to the present no solution as to what legislation is both necessary and desirable to deal with the chronic typhoid carrier has been arrived at. Forcible quarantine, imposed for three years in America, had to be abandoned. Granting a pension, as in the Aberdeenshire case, might prove an inconvenient precedent. In Melbourne, legislation has been suggested to make it an offence for any one who is a typhoid carrier to be employed or to apply for employment. It must not be forgotten that the "carrier" is a victim, and not an intentional offender, and

methods of supervision and control are indicated rather than harsh methods, which rarely succeed in relation to disease prevention. At present the legal position of the "chronic typhoid carrier" in England is apparently one of complete freedom from the operation of the Public Health Acts.

Summary of the Position.

Whether the case is nursed in a general hospital or in the fever hospital of a sanitary authority, investigation as to existence of the carrier condition should be commenced during convalescence, before discharge from hospital. Two or three routine examinations at intervals of urine and faeces ought to be made in every case. This is useful in two ways: not only does it give definite indication as to cases needing after-supervision, but it calls early attention to the condition, and gives opportunity for commencement of treatment at a time when it may be of service to the patient. All hospitals must possess laboratory equipment or make suitable arrangements for securing the necessary determinations. In the majority of hospitals at the present time typhoid convalescents are discharged on clinical symptoms alone. The bacteriological method simplifies the after-supervision of cases; those giving positive indications must, of course, be kept under as continuous supervision as possible, and others who deal with food supplies should be advised to submit to periodical examination. It is doubtful whether it is advisable to warn employers, or only in very exceptional cases.

All convalescents from typhoid fever should receive clear instructions as to their responsibilities in the matter, such as those issued by the Typhoid Station at Strassburg or those issued in Bristol, where also a list of typhoid convalescents is kept, so that they may be visited and advised, especially in regard to the relation of their occupation to dairy work or food supplies.

The establishment of a general system of supervision corresponding to the South-West German stations, and the adoption of standing orders similar to those employed at the Pfalz Station, may usefully engage the attention of the central government department, and is much to be desired.

Until the position of the chronic typhoid carrier is legally recognized as an infective condition, bringing the patient under restrictive control in his own interest as well as in the public interest, it is practically impossible to secure anything like effective bacteriological control over convalescents after discharge from hospital.

The standing orders employed in the Pfalz Station have been in force since 1904.

1. Typhoid carriers and clinically cured cases are retained under bacteriological supervision until a bacteriological cure results.

2. So long as they discharge bacilli, the official disinfectors carry out or supervise the continual disinfection of privies used by them with $\frac{1}{1000}$ of lime.

3. In the case of school children, workers in factories, and such like, teachers, officials in State and private bureaus, these may carry on their respective duties, provided that the schools, factories, etc., are provided with suitable wash basins and soap. On commencing duty and on every occasion when the privy or urinal is visited, the hands must be cleansed.

4. Typhoid carriers are to be restrained from the preparation and sale of food stuffs.

DIPHTHERIA CARRIERS.

The necessity for control over the discharge of diphtheria patients by bacteriological methods is generally recognized, and, being comparatively simple is widely adopted.

After-Control.

The amount of after-control necessity during epidemic diphtheria varies in different circumstances. Probably only a small percentage of the morphologically typical diphtheria bacilli found in well persons not recently exposed to the disease are virulent, but even if only a small proportion is likely to transmit the disease, they may form an important factor in its spread. Infected adults are ordinarily less likely than children to communicate the infection, so that the following conclusions may be formulated :

1. It is impracticable to isolate well persons infected with diphtheria bacilli, if such persons have not, so far as known, been recently exposed to the disease.

2. It is not advisable, as a matter of routine, to isolate from the public all the well persons in infected families, schools, and institutions.

The exceptions have to be made, as matter of expediency, in regard to wage earners, business and professional men. It is, however, advisable to keep the children in infected families away from day school, Sunday school, and all public places. Wage earners may usually be allowed to continue their work, but teachers, nurses, and others who are brought into close contact with children, and also milkmen, should not be allowed to do so.

In schools and institutions all infected persons, sick or well, should, if the infection is not too widespread, be separated from the others.

When diphtheria appears in a community which has for some time been free from it, it is advisable to isolate all persons who have been brought into contact with the patient until it shall have been shown that they are free from diphtheria bacilli.

"Chronic Carriers."

The details given by Councilman, Mallory, and Pearce show how diphtheria may persist in the accessory sinuses of the nose for long periods, without clinical symptoms. In such cases the bacilli may disappear upon douching the nose with antiseptic solution, but as soon as the cleansing is stopped they reappear. Fortunately such cases appear to be rare, and are only likely to occur during invasion of a district by

an organism with high potentiality of infectivity. When they occur there is no help for it but to keep the patient, if a child, under continuous exclusion from school, and under prolonged treatment; in a tediously prolonged case, determination of virulence of the bacilli found is an advisable step.

Quite recently, Dr. Garrett, Cheltenham, has questioned the advisability of search for "carrier" contacts and the reliability of the bacteriological indications obtained, and quotes the experience of ten years during which success in dealing with diphtheria has been achieved without recourse to bacteriological control of contacts, and with an average annual death-rate of 1 per 10,000 population. He points out that during these ten years there was no prevalence of diphtheria inviting the name of "epidemic," and that no school outbreaks caused trouble.

This is no doubt correct; from my own experience I can furnish a parallel. As I have pointed out elsewhere for fourteen years up to 1901, although some diphtheria was always present in the city, not only was the fatality singularly and consistently low, but there was no sign of any special school influence, and school outbreaks were practically unknown; no hospital beds for diphtheria were provided, nor was there any apparent need for them. But with the introduction of a virulent type of diphtheria in February, 1900, the conditions were suddenly and completely changed. The fatality rose from 1 per 10,000 in 1899 to 3.1 in 1900, and to 5.4 in 1902. Hospital beds became urgently needed; indeed, the general hospitals were called upon to assist in providing beds, school outbreaks became common and serious and bacteriological methods became imperative, and, used with discretion, gave indications of extreme value. The epidemic wave period of diphtheria is so long that a period of ten years is insufficient for generalization. At one time bacteriological examination and restriction over contacts and carriers may be immaterial or inadvisable; at another, when dealing with a different strain of bacillus, they may become essential.

II.—EDWARD WILBERFORCE GOODALL, M.D., B.S.

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GENERAL CONSIDERATIONS.

While the paper by Dr. Davies has dealt almost entirely with typhoid and diphtheria carriers, yet the subject for discussion is the general one of disease carriers, without limitation to any particular disease. I propose, therefore, to say a few words on the general subject in so far as the infectious diseases of this country are concerned.

Now a "carrier" of any particular disease is a person who bears in certain of his organs the particular organism which is believed to be the cause of that disease, in a more or less pathogenic condition, and so placed as to be capable of being transmitted to susceptible persons. The carrier may or may not have previously suffered from the disease in question. Mostly he has. Usually, too, he is in a normal state of

health"; but occasionally he may be slightly out of health, though he does not then present the special symptoms of the disease of the germ of which he is a carrier. Though the term "carrier" is of fairly recent origin, yet for some diseases the carrier has been known for a period considerably longer than that for which the word has been in use. Take scarlet fever, for instance. All the investigation into the origin of the so-called return-cases has gone to show that they are connected with what, in typhoid fever, would be called acute, or temporary carriers. And in diphtheria the bacillus-bearer was recognized long before the typhoid carrier. But what is so striking about the typhoid carrier, and has led to the intensity of the interest that has been manifested in him, is his unexpected chronicity, and the solution it offers of outbreaks and of sporadic cases of typhoid of which the cause is otherwise inexplicable.

Before I go any further I wish to make it clear that in my opinion, so far as it is of any worth, the existence of the carrier and his power to work evil have been amply demonstrated. At the same time I thoroughly agree with the note of warning which was sounded by the President of the Epidemiological Section of the Royal Society of Medicine in the admirable address he delivered in November last, an address I shall be obliged to refer to later on. Dr. Theodore Thomson warned us against both over-estimation and under-estimation of the carrier factor in the causation of typhoid fever. At present I think we are in need of being careful to guard ourselves against over-estimation of the potentiality to cause an outbreak in respect of the typhoid, or, for the matter of that, of any disease carrier who has not previously suffered from the disease. An outbreak of the disease occurs of which the origin cannot be found in common sources, then a carrier is discovered who has never had the disease. If you are going to admit the existence of this class of carriers, as I think you must, yet it will in many instances be extremely difficult to prove that any particular carrier of that class is the cause of the outbreak you are investigating. For unless you have evidence that he has been a carrier for some time, which *ex hypothesi* you have not, you cannot refute the suggestion that he has acquired the organism—harmless to himself—of which he is the carrier from the same source as those to whom they have been noxious. You might, indeed, find it difficult to refute the statement that he had derived the organisms from these very persons. I will illustrate my meaning with an extreme case. If I systematically examine the nasal and faucial mucous membrane of nurses in the diphtheria wards of a hospital, and find that in one or two of them diphtheria bacilli are present, as I am very likely to find, it would be absurd to conclude that these carrier nurses are the cause of the disease in the patients.

I gave just now a definition of the carrier, a definition which is much the same as that which has been adopted by all who have written on the subject. But writers have divided carriers—at any rate the typhoid carriers—into two classes, the acute and temporary, who carry the or-

ganisms for only three months, and the chronic or permanent, who carry the organisms for upwards of three months, even for years, and perhaps for the remainder of their lives. Concerning this distinction I shall say a few words when I am speaking of the various diseases in which carrier cases occur.

Now what are these diseases? So far as I know there are not very many in this country. Of definite diseases, there are scarlet fever, typhoid fever, diphtheria, cerebrospinal fever, and, I believe, pneumococcal infection, possibly influenza and whooping-cough, and erysipelas as a definite cutaneous disease. Of less defined diseases, there are various coccal infections, especially streptococcal. It is a curious fact that those diseases of which the infection is most readily conveyed from the sick to the healthy during the acute stage, either mediately or immediately, seldom, if fever, give rise to carrier cases. Measles, small-pox, and chicken-pox have never, or to all extents and purposes never, been credited with return cases; nor has even a suggestion been made that they ever become carriers.

The next question is, What is the number of carriers of each of these diseases present in the community? To answer this question we have to rely very largely upon the evidence of the bacteriologist. It is only the carrier known to have previously suffered from the disease, whichever it may be, who is likely to be detected by other than bacteriological evidence. Consequently in diseases of uncertain bacteriological origin most of the carriers are overlooked, and only in diseases of which the bacterial cause is definitely known can any attempt be made to estimate the number of carriers. In scarlet fever, of which the bacteriology is uncertain, we have the evidence of "return cases" as to the presence and influence of carriers. Most of them are temporary, but now and again one comes across a chronic example. Whether the large number of cases of scarlet fever that occur of which the origin can be traced to no previous case are in any degree due to carriers, I do not know. There are reasons for believing that the infecting agent of scarlet fever may remain alive and potent for a considerable time outside the human body. In the case of typhoid fever and diphtheria we are on firmer ground. The evidence goes to show that in typhoid fever at least 3 per cent., and in diphtheria rather less, of the population in localities where these diseases are at all prevalent are carriers. Of other diseases in which there are reasons for supposing the existence of carriers, there is no evidence of their prevalence numerically.

But the most important questions that can be raised concerning carriers are:

1. Are carriers a cause of the dissemination or of the continued prevalence of disease?
2. If they are a cause, to what extent do they exert their influence?
3. How can that influence be counteracted?

In attempting to give satisfactory answers to these questions I must perforce confine my remarks to those diseases amongst which we definitely recognize the existence of carriers.

1. To the first question an affirmative answer must be given. There are now a sufficient number of instances, carefully and conscientiously investigated, to make a negative reply impossible, at any rate in respect of typhoid fever, diphtheria, and scarlet fever.

2. But it is with regard to the answer to be returned to the second question that controversy is likely to arise. I can conceive one set of investigators attributing nearly every epidemic of a disease to carriers, and another set limiting their influence to the causation of limited outbreaks here and there. And I can conceive that each view may be correct. It entirely depends on the circumstances of the cases—a condition which enthusiastic upholders of any particular view are very prone to forget. I may, perhaps, make my meaning clear if I refer to the history of typhoid fever in this country during the last half-century or so. During the period to which I refer the death-rate of this disease has fallen from upwards of 300 per million to between 60 and 70 per million. There are reasons for thinking that the fatality—the case-mortality—has been fairly constant on the whole, and I do not think we shall be far out if we assume that this remarkable lessening of the death-rate has corresponded with an equally remarkable diminution in the number of cases. And I think that those responsible for the health of the country, central or local, are entitled to congratulate themselves that this course of events has not been accidental—has not been a part of the natural history of the disease, but has been due to intervention on their part. The provision of pure water supplies, free from liability of contamination, and the installation of appropriate systems for the disposal of sewage, have chiefly contributed to the result—chiefly, but not entirely. When it was found that typhoid still remained prevalent to an extent which was higher than, might have been expected when the preventive measures that had been carried out were considered, other sources of the disease were looked for, and found in the contamination of shellfish by sewage, and so forth; and these sources having been dealt with, and there still being a residuum too large to be neglected, further research has revealed the carrier; so that in this country we are called upon to investigate the influence of the carrier under conditions which are of such a nature as to prevent him from exercising to the full any evil influence he may possess. Had bacteriological science been in existence fifty years ago, and as advanced as it is now, what a time the bacteriologist and the epidemiologist would have had with carriers! But there are places in other countries which are in the same condition from the point of view of sanitation as this country was fifty years ago. And I do not think that we can attribute entirely to the zeal of the bacteriologist the fact that so large a part of our knowledge on this subject has been derived from foreign countries.

Now what I have said concerning typhoid fever is equally true of those diseases which furnish us with carriers and of which the mode of infection is known. Deal with conditions affecting the mode of infection, and you will to a large extent—though I do not say entirely—deal with the carrier, and you will lessen his influence.

Dr. Theodore Thomson, in the address to which I have alluded, has endeavoured to estimate the influence of the typhoid carrier in this country. But in order to obtain data as to the number of carriers existing in the community he has to go to German and American authorities. From which it would appear that there are about 108,000 carriers in England and Wales. Personally I am inclined to believe that this is an over-estimation, because founded on the basis of the German and American data. Exact evidence of the frequency of the carrier, especially the chronic carrier, in the population of England and Wales is wanting. But, for the reason I have given above, I should expect to find carriers in smaller numbers relatively than in countries in which typhoid fever is more prevalent than it is in our own. Dr. Thomson's study of the behaviour of typhoid fever in Worthing, Maidstone, and Lincoln, before and after the well-known epidemics in those towns, goes to show that carriers did not have any influence in causing an increased prevalence of the disease in the pre-epidemic and post-epidemic periods.

In diphtheria the influence of the carrier does not appear to be very extensive. There must be a considerable number of convalescents from this disease who are carriers when they leave hospital, and probably for some time afterwards. But the number of cases to which they give rise immediately after their discharge is very small. Chronic carriers are few and far between. The same remark applies to the chronic carrier in scarlet fever. But the acute carrier in this disease is of sufficient importance to have given rise to considerable investigation and administrative treatment. I am inclined to think that in both these diseases the continued prevalence is kept up not so much by healthy carriers as by mild and unrecognized cases of the disease.

3. The third question is, How can the influence of the carrier be counteracted?

I think that it will be readily granted that all general sanitary measures that are designed efficiently to prevent the infection of any member of the community should be carried out first of all. It is useless giving minute instructions to a typhoid carrier as to personal cleanliness if the water he uses for the purposes runs into a drain which is leaking so as to permit its contents to contaminate a water supply. When these measures have been put into practice attention may be devoted to the individual carrier.

In scarlet fever it is the temporary carrier we have most to fear. Bacteriology does not help us in this disease. The most efficacious method of keeping at its lowest figure the percentage of return cases seems to be that in which the patient two days before his discharge is

taken from the ward, thoroughly washed from head to foot, and placed in absolutely clean clothing in a ward or room which has not contained a case of scarlet fever. Here he should be detained for two nights and the intervening day, after which he should be given the ordinary morning wash, and sent out of the hospital in the clothing provided by his friends. It is quite unnecessary to give him a bath just before he leaves, as need to be the case. Patients with discharging ears and nose, and presenting a morbid condition of the fauces and nose, should be detained for twelve weeks unless the discharge of morbid condition has cleared up.

In the case of diphtheria the most obvious course to pursue to prevent the harm that might be effected by temporary carrier is not to let the convalescent out of isolation till bacteriological examinations have shown, so far as they can show, that he is free from bacilli. Occasionally one comes across a case in which the bacillus persists in the nose or fauces for weeks or even months after an attack of diphtheria. I have tried various solutions with which to swab the throats of such cases; but none have been satisfactory. Diphtheria antitoxin is useless. Subcutaneous injection of a weak solution of an endotoxin derived from diphtheria bacilli appeared to be of use in 4 cases. But as a matter of fact I am coming to the conclusion that, after all, the influence of the diphtheria convalescent for harm is such over-rated, that he may be discharged from hospital at the end of about six weeks without any special precautions being taken to free him from bacilli. As I have said above, return cases are few in diphtheria—so few as to be ignored. That comes out clearly from the experience of the Metropolitan Asylums Board's hospitals, in which there is no difference in this respect between the hospitals in which a bacteriological test is applied upon the discharge of the patient and those in which it is. And I may also refer you to a paper by the Medical Officer of Health of Cheltenham, which appeared a few months ago in *Public Health*. His experience was that diphtheria did not spread in that town, even though no bacteriological examinations were made before the patients were pronounced free from infection. I am of opinion that however desirable it may seem to be, from the hypothetical point of view, to insist upon freedom from bacilli as the criterion of freedom from infection, practice has shown that it is quite unnecessary, and hardly worth the expense it entails. Further, an attempt made in one large American city to free a certain district of diphtheria by dealing with carriers by bacteriological methods proved a failure.

It is the typhoid carrier who is particularly exercising the mind of the sanitary administrator at present. Seeing that the infection of typhoid fever is nearly always acquired by means of food, it would appear that special attention should be directed to preventing known carriers from engaging in occupations connected with the conveyance and preparation of food. Amongst the better classes this will not be difficult to accomplish; but amongst the poor until their surroundings

are vastly improved, it will. In a few places advice, both oral and printed, has been given freely to carriers or suspected carriers. Examples of these printed instructions will be found in Dr. Ledingham's admirable report on Typhoid Carriers made to the Local Government Board. Some of these rules seem to me to be too elaborate and too numerous, and some are quite inapplicable for use amongst the poor. Gashtgens, for instance, recommends as a disinfectant for the hands eau-de-Cologne or spirits of wine! By the way, Dr. Ledingham states more than once that much good has been done by the adoption of rules such as those to which I am referring. But I do not think he brings forward any evidence in support of the statement.

Various methods of treatment by drugs and by vaccines have been tried in order to free permanently the carrier from his bacilli. But none of them appear so far to have been efficacious. From that we know of the chronicity of carriers it follows that, in order to be certain that a carrier had become permanently free, he must be under observation for several years.

In conclusion, I think that a few simple instructions given to those carriers who are known to be engaged in the preparation of food should suffice. Those engaged in such occupations as milking or conveying milk should be required to seek other occupations. The treatment of carriers amongst the poor would be much facilitated by the establishment of kitchens for the cooking of the food of large numbers of families. It would be easy to provide for such institutions a staff free from carriers; and the influence of the individual carrier in the community would be confined to direct infection, the danger of which attention to ordinary rules of cleanliness would reduce to a minimum.

DISCUSSION.

Dr. J. C. G. Ledingham (London) said that for the purpose of this discussion the general importance of carriers in the spread of infectious disease was taken for granted, and that they were there to consider the administrative difficulties which the hygienist had to deal with in the light of this new knowledge. As a bacteriologist, he was aware that it was not always easy, and sometimes even not expedient, for the hygienist to put into practice the recommendations of the laboratory; and, further, that laboratory results were occasionally difficult to correlate with epidemiological observation. Still, he was confident that it was only by an active co-operation between the hygienist and the bacteriologist that the best results from the administrative point of view could be attained. With regard to enteric carriers, the first problem was the best method of dealing with the typhoid convalescent, and Dr. Davies had already referred to the disadvantages from which any routine method of bacteriological examination suffered, owing to intermittency in the discharge of the infective germs, and other causes. This he fully recognized, but as the result of some experience with this method of

routine examination, he believed that it was possible thereby to bring to light a small percentage of carrier cases which were on the way to become chronic. After all, the percentage of cases were still carrying the bacillus after one year was small, and not more than 3 or 4 per cent., so that if they could retain those under observation with suitable instructions as to disinfection and personal hygiene, much good might be done. Moreover, the earlier the period at which a person was revealed to be a carrier, the greater was the chance of applying some form of treatment which might have a reasonable prospect of success. Late control examination of convalescents at the end of six months and at the end of one year was also important, as thereby some carriers might be brought to light which had previously been missed. There was always a difficulty in obtaining specimens, but with tact it might be got over. With regard to temporary carriers, which probably played a great part in spreading infection during the acute stage of an epidemic, he would plead for a much more stringent search for the abortive or ambulant cases. If there was one fact that had emerged from recent bacteriological work, not only in connexion with enteric but also with dysentery, cholera, meningitis, and diphtheria, it was that the clinical manifestations accompanying a bacteriologically demonstrable infection might vary enormously. The second problem was the best method of dealing with carriers which had been found to be associated with outbreaks of enteric. At present they could do little more than give advice as to disinfection and personal hygiene. But it was too early yet to be despondent with regard to the possibility of curing these cases. Some interesting results had been obtained by treating experimental typhoid infection in the rabbit. Temporary rabbit carriers were easily obtained and from the results of Conradi and others with intrarectal injections of chlorform it would seem that this condition might be comparatively readily cured. The chronic rabbit carrier was rather difficult to obtain. One of his colleagues had been experimenting on this question, and had succeeded in recovering typhoid bacilli from the gall bladder of a rabbit three months after a single intravenous inoculation. When it became possible to obtain a large supply of these cases in the rabbit it might be possible to institute some form of treatment which might ultimately be applicable to the human carrier. There was one suggestion he would make with regard to typhoid carriers—namely, that declared carriers should be asked voluntarily to enter some central institution, perhaps in connexion with a hospital for infectious diseases, so that their condition might be accurately studied by a competent bacteriologist appointed for that purpose. Lunatic carriers might be available without much official difficulty. It was only by a thorough examination of a series of such cases under similar conditions that they could hope to gain a deeper insight into the nature of the carrier condition. With regard to diphtheria carriers, it was highly important that the organism should be isolated in pure culture and its properties determined. That we espe-

daily needed in cases of ear and nose infection. The determination of the virulence for the guinea-pig should be undertaken, although there was at present no sufficient evidence to justify their ignoring those cases which harboured non-virulent strains. Sometimes virulent and non-virulent strains occurred together in the same case, and in some epidemics non-virulent strains might be frequent among the cases. With regard to treatment, much might be done towards reducing the amount of possible infection by antiseptic gargles and the like, and if infection were confined to the tonsils, enucleation after a dose of antitoxin had proved to be of service. The intermittency of carriers was also to be considered, and therefore in schools one should keep an eye on discharged carriers for months or years and re-examine them, should cases of diphtheria recur.

Dr. J. Spottiswoode Cameron (Leeds) said he was strongly of opinion that return cases of scarlet fever were most of them due to carriers. After eliminating all practical possibilities of inefficient disinfection six, nine weeks, or even longer before the discharge of the patient, there remained a certain number of cases in which the patient developed, when sent home, some nasal or other mucous discharge, although all such discharges were non-existent when the patient left the hospital, and bacteriological examination showed no streptococci. Public medicine was greatly indebted to the bacteriologists, but the debt would be infinitely increased if they would ascertain what was the essential *contagium vivum* of scarlet fever.

Dr. H. J. Egerton H. Williams (Sheffield) said that in his experience it was practically impossible to carry out a detailed and systematic examination of all cases of typhoid fever with the view of isolating carriers, owing to the fact that trained assistance was insufficient. The results of several large hospitals went to prove that, so far as could be ascertained, very few cases became carriers. Such being the case, there was not sufficient justification for any radical and expensive measures. In view of the imperfect knowledge of infectious diseases and the necessity for regular scientific investigation, Dr. Williams suggested that the State might possibly appoint a certain number of investigators to be attached to several of the larger hospitals of the kingdom, who might in union eventually shed light on the cause of those diseases. Local authorities could not themselves be expected to go to that length.

Dr. A. H. Bygott (Barking) said that attention possibly should be paid to obscure diseases of young children; recently it was possible to trace a small outbreak to one who had been treated for a prolonged illness in which enteric fever was not suspected. Dr. Harris of Southampton had recorded a similar case. With reference to scarlet fever carriers, undoubtedly some of the cases were associated with unhealthy naso-pharyngeal conditions which might be considerably reduced by surgical treatment. That was apparently quite safe if done carefully by the removal of adenoids by one sweep of a curette without anaesthesia—a simple and

almost painless proceeding which had been found to be quite sufficient for the purpose. The suppurating condition of the adenoids, as seen by inspection, thoroughly justified the removal. The use of vaccine-treatment in such cases was likely to lead to good results, and it was desirable that medical superintendents in large institutions should stimulate their assistants to make investigations in this direction.

The President in concluding the discussion, said that it had shown the importance of looking at the problems of public health from different points of view, and that at the present time the position was that carrier cases should be regarded as possible producers of disease, but that the medical officer of health must not neglect anything to endeavour to elucidate the difficult and obscure points of his work.—*The British Medical Journal*, August 12, 1911.

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SALVARSAN: FRIEND AND FOE.

BY ORREN B. SANDERS, M.D., BOSTON, MASS.

The venereal disease constitute collectively the arch enemy to the moral and physical well-being of the American people. This truth is recognized by many enlightened men and women; it is dimly perceived by many half-enlightened; it is unknown or ignored by the great majority. There is a hopeful movement on foot, however, to change this crass ignorance, this criminal indifference, to commendable knowledge and compulsory action.

The medical profession has been inexcusably dilatory in exerting itself to prevent these diseases. It is even now infinitely more concerned with discovering effective methods of cure, than of eliminating this blight, this blot upon our manhood and womanhood, this insult and menace to the clean, this deeper degradation of the unclean.

It may be said that to cure one case of venereal disease is to prevent the development of others. This is true, but it still fails to reach the root and source of this abundant evil—the distorted viewpoint, the moral callousness, the dominance of lustful passions which undermine that foundation of mental, moral and physical integrity upon which only the superstructure of a great nation enduringly rests. It is the aim, therefore, of an increasing number of good citizens, lay and professional,

to secure such a widespread comprehension of sexual truths, as shall conduce to the rearing of a generation not less strong in virile instincts and normal passions, but far more enlightened than the present, far stronger in right knowledge, in honor and self-control, a generation additionally defended from itself and from its inherited and acquired degenerates, by laws rendering propagation of the insane, the feeble-minded and the idiotic, the rapist, the chronic inebriate impossible and the marriage of such and of those having a venereal disease difficult and punishable by law.

It is not my purpose in this paper to touch upon gonorrhœa, although it is most difficult not to do so, it being a disease so prevalent, and so underestimated in its disastrous results that one feels in duty bound to seize every opportunity to earnestly urge the help of one's confreres in controlling it. But there is at the present moment a very special reason for concentrating attention upon that widespread and intractable malady, old as time itself in human history for aught we can prove to the contrary, that filthy and persistent pollution of the system universally known as syphilis or lues.

Where is its stronghold? The skin? Answer yes, and as the endless line of syphilitics pass before your mental vision, you shall say in turn; the eye and ocular appendages, the ears, hair, nose, mouth and tongue, larynx, lungs, heart and blood-vessels, stomach, liver, spleen and pancreas, rectum and anus, bones, joints and bursae, tendons, tendinous sheaths, muscles, lymphatic glands, the genito-urinary organs, and the entire nervous system.

The affected fetus utero is fortunately born dead, murdered by ancestral or parental sins, or wizened and wailing lives to die in a few months, or worst of all survives to reach manhood or womanhood with a systemic taint evidenced at, if not before, puberty, or in later life, by one or many of the manifestations of the acquired form.

There is no need to delineate the features and forms of the victims of this fell disease at its worst: memory reproduces

them in all their distortions, loathly disfigurements, nervous degeneracy. Syphilis has been accorded one merit, with a very large interrogation point after that commendatory word, namely, that it does not cause death. "Syphilis in its worst manifestations and activities," says an eminent syphilographer, "often mutilates, paralyzes and cripples, but it rarely kills."

This statement, made but little more than fifteen years ago, is receiving a constantly diminishing credence. Our rapidly increasing knowledge of the power of this infection leads us rather to adopt the pronouncement of modern science which identifies by laboratory methods so many diseases leading to the grave as of syphilitic origin, in which otherwise the etiology could not have been determined. But leaving out the reassuring factor of fatality, for why should there be this unreasoning eagerness for the mere survival of poison-saturated humanity? how conscientiously have specialists labored to stay the course of syphilis, modify its manifestations, and eradicate it from the system! How almost without hope at times of lasting benefit has treatment been prosecuted! How especially has the profession been burdened with the knowledge of the never ceasing danger of communication of contagion through superficial lesions!

What have been our therapeutic resources once the disease has been diagnosticated? Passing by for the moment hygienic measures, the medicinal remedies regarded as standbys are not numerous, nor ever have been. Mercury first and foremost for the early, and the iodides for the later periods make a not lengthy list. The chief changes have been rung through the variety of the preparations of these two mighty allies in the fight, and in the method of their administration.

Generations of syphilitics came and went mercurialized and iodized, and still no noteworthy progress was made until within the last few years new factors have given a tremendous impetus to our therapeutic advance, namely, the serum reaction of Wassermann which, although not infallible, is a valuable diagnostic test, and the demonstration by Schaudinn and

Hoffman of the *treponema pallida* as the cause of syphilis. These two valuable contributions to our approximately exact knowledge of this terrible scourge, hitherto so imperfectly comprehended, and concerning which we have yet so much to learn, have been largely instrumental in furthering Ehrlich's endeavours to give the world a new and, we trust, effective curative agent. Without the identification of the spirochæta, indeed, there could have been no intelligent search for a cure, but only a blind groping in the dark. With a knowledge of the cause, however, the goal was clearly indicated, that is, the finding of a substance fatal to the parasite, innocuous to the affected individual. Without the Wassermann test or its modifications, also, the absence or presence of the spirochætæ could not have been even approximately demonstrated.

It is needless to recapitulate the successive steps taken by Ehrlich and his associates before he was able to offer to the profession for ultimate acceptance or rejection the popularly known "606," the chemical compound dioxidiarmidoarsenobenzol, now to a limited extent procurable under the distinctive name of "salvarsan."

The use of arsenic in syphilis has long been not uncommon. Before the introduction of the new—as applicable to syphilis—arsenical compounds atoxyl, soamin, and arsacetin, dermatologists and syphilologists prescribed not unfrequently arsenic in the form of Fowler's solution, Donovan's solution and arsenious acid. Their object was to obtain not only its supposed specific action on certain intractable cutaneous manifestations, but also its tonic and alternative effect, which is not yet perhaps sufficiently appreciated.

The synthetic compounds atoxyl, soamin and arsacetin were discredited by the blindness attributed to their use in a number of cases, and by certain gastro-intestinal by-effects. Salvarsan, we are told, is but a modification of one of the main reduction products of atoxyl. To the general practitioner or even to the average specialist this statement is of little interest. What he primarily wants to know is: Will salvarsan cure syphilis and

with safety to the patient? Yet upon reflection he will find that even if these questions could be answered promptly in the affirmative, many others of no inconsiderable importance would arise. But as it happens, we are in no position as yet to assert that salvarsan can be relied upon as an unfailing specific in the cure of syphilis. We can not even say that it can be injected without fear of any untoward results following. We do not even know definitely what dose should be employed. Michaelis gauges the dose by the body weight of the patient, giving one centigramme per kilo. But while the kilo of living matter in one individual represents the same weight as in another, it represents little really intrinsically identical. The action and reaction of all drugs prove this, were other evidence lacking. Consequently it behoves the prescriber of salvarsan to proceed with caution in the selection of the dose. But before the decision as to dosage, must come the selection of the case.

It is being increasingly shown that here there is not only room for the exercise of discretion, but also an imperative necessity for the application of the greatest skill and judgment possessed by the expert. Ehrlich strongly emphasizes this point. Elsner in the Journal of the American Medical Association, December 10, 1910, who was privileged to make observations at Ehrlich's laboratory at Frankfort during the previous summer, mentions among other contraindications for the use of salvarsan, an unfavorable general condition of the syphilitic, that is, sickness of any kind, particularly acute infections however slight, including ordinary colds, bronchial disturbances and acute indigestions. Such affections, he says, positively contraindicate the use of arsenobenzol. It is not often we hear of this wholesome advice originating at headquarters. We have known for some time that Ehrlich deprecates, if not forbids, the use of his powerful new remedy in advanced stages of degenerative diseases of the nervous system, including cases of paresis and locomotor ataxia, associated optic neuritis, and in all cases in which organic diseases of nonsyphilitic origin are demonstrable. The latter whether syphilitic or non-syphilitic are to be set aside as un-

suitable when occurring in those advanced in years, and affecting the cardio-vascular system.

To rehearse the triumphs of salvarsan is unnecessary. They are numerous and important, and it is no part of this paper to minimize or depreciate them. But at first, and in the enthusiasm and relief incident to the discovery of a powerful remedy against so fearful a foe, it is most natural that a very optimistic viewpoint should obtain, more especially when the salutary changes wrought in superficial lesions are little less than marvelous. It is natural that the insidious nature of this foe, its capacity for latency, even the limitations of its host to sustain both the invasion of virulent parasites and the abnormal systemic condition arising from the introduction of a concentrated poison, the sudden destruction of millions of hostile bodies, the equally sudden release of endotoxins, or even the possibility of a maximum of absorption with a minimum of elimination of the drug, or of special intolerance of arsenic, might all recede into the background.

But a danger ignored is not a danger eliminated, and it is therefore the duty of the specialist to sound a note of caution, and particularly to call attention to those incidental dangers outside the province of the scientist, exclusively engaged in arduous clinical or laboratory research.

What are the prerequisites to the administration of salvarsan? Among them the intelligent selection of the case. In a general way the contraindications have been referred to. The indications for its use—always keeping the above in mind—have been summed up by Blaschko as follows: “(a) Malignant cases of syphilis which have not reacted to mercury. (b) All forms and stages of syphilis in individuals who show an idiosyncrasy towards mercury. (c) Cases in which recurrence occurs soon after mercurial treatment. (d) Cases in which recurrence occurs while the patient is taking mercury. (e) Primary lesions before the appearance of secondaries. (f) Constitutional syphilis not hitherto treated in the primary or secondary stages. (g) In late recurring secondary lesions it should be used in combination

with mercury and iodides. (h) In parasyphilitic affections of the cardio-vascular and nervous systems, it should be used only in the early stages. Ehrlich recommends that primary lesions should be treated as early as possible, before the appearance of secondaries, together with energetic local treatment such as excision, cauterization etc., to aid in causing complete sterilization.

The case selected, all competent authorities are agreed that prior to the administration of arsenobenzol a careful examination should be made of the lungs, heart, arteries and abdominal organs, and especially of the eye and by an ophthalmologist. The urine should be tested, as the presence of sugar, albumin and casts in large quantity contraindicates the use of the drug. In addition, MacRae of New York insists that no patient should be treated without previous Wassermann reaction. It is to be remembered that salvarsan should not be used in ambulant cases, but that the individual should be in a hospital, sanitarium, or private home where nurse can be had, and the patient be under observation for ten days or more.

Two other factors must be taken into consideration, namely, the preparation of the drug and the method of its introduction. The point I wish to make does not require the description of either of these, it merely necessitates calling attention to the fact that the greatest nicety is demanded in so preparing the solution as to secure its being perfectly neutral, while in the matter of injecting the fluid it is obvious that, especially if the intravenous method is to be adopted, a high grade of technic is indispensable. Ehrlich now advocates this method of injection rather than the intramuscular or subcutaneous. Perfect asepsis must be observed whichever is chosen. Wechselmann of Berlin says that while the intravenous administration, if carefully carried out, is painless, it is followed by chill, vomiting and fever. He therefore prefers the subcutaneous beneath the scapula. The intramuscular has been followed by severe pain, swelling, rise in temperature, increase in pulse rate, urticarial or erythematous eruptions, gastrointestinal disturbances and ocular

complications, these bye-effects of the intravenous and intramuscular administrations of the drug emphasizing the need of after care and observation. The Wassermann reaction should be obtained at intervals, and if not negative within three or four weeks the dose can be repeated.

What, therefore, do all these essentials to the successful application of salvarsan show : the discriminating selection of the case and determination of the dose, the expert preliminary examination of organs and functions, the use of the Wassermann reaction before and after the treatment, the skilful technic in drug preparation and administration, perfect asepsis, and the insistence on proper surroundings and care ?

They show that this remedy above all others is not one which should be used by that large proportion of general practitioners who are without both the requisite knowledge of the disease and the proper facilities enabling them to comply with the conditions under which alone, at the present time, salvarsan can be safely used, if, indeed, safety can be guaranteed.

If then this drug is not suited to adoption in the treatment of syphilis by so many legitimate members of the profession, and if at the same time, as is the case, accounts of the marvelous cures or at least apparent cures, are being daily more widely circulated and more generally known, how real is the danger threatened by its adoption as a new bait and money-getter, by the fraudulent practitioner, the quack, the so-called medical institutes, the pseudo-scientific advertisers of the "sure cure" !

No difficulty whatever will be experienced by these medical fakirs, in assembling for their pernicious advertising literature, testimony from the most reputable medical journals of extraordinarily good results from the use of salvarsan. What the public and especially the infected public will not know is all that successes evidence of special skill and knowledge on the part of the experts who had charge of these cases. The syphilitic public will willingly believe what is most ardently desired to believe, namely, that the "pox" is to be reduced to the level of a harmless affection ; that its 75 per cent. of contagion through

sexual congress and 25 per cent. of contagion through extra-genital infection will equal 100 per cent. immunity from serious effects if only the confident quack will inject a dose of 606. That large portion of the public, ruled by its lustful desires, will still more confidently go about the gratification of its sexual passions. .

That these dangers proceeding out of the very excellences of the new remedy, and the utter unscrupulousness of the medical charlatan are already upon us, is shown by the following advertisements quoted in February by the Journal of the American Medical Association as having appeared in the newspapers : "606, Prof. Dr. P. Ehrlich's Cure for Blood Poison. Now on Sale. All Symptoms Removed in 2 Days. One Dose Cures. Remember, All Symptoms Disappear in Two Days. One dose cures permanently. Salvarsan can be taken in the privacy of the home. For thirty dollars the '606 Laboratories' will ship in plain unmarked package the necessary dose with simple directions."

And this : "if you are threatened with blindness, paresis (complete loss of memory), rotting bones, decaying brain, **ALL** caused by contagious blood poison, 606 WILL SAVE YOU."

Here we have the most misleading and damnable lies, and the proffer of a drug dangerous and poisonous in inexperienced hands, if, indeed, the advertiser really supplies it; a drug put up in vacuum tubes in single doses, namely, 0.6 gm., which contains 0.2 gm. arsenic or fifty times the amount that, in the usual pharmaceutic combinations, would cause poisoning.

Such advertisements are positively criminal. On the Continent the same heartless trafficking has begun which American Medicine editorially appropriately characterizes as positively "ghoul-like." In many cases, says this journal in effect, the manifestations of the scourge of syphilis have been removed by ordinary mercurial treatment unknown to the patients, who have nevertheless been charged fabulous rates for the supposed use of 606. As is well said, these victims will go forth unconscious that the real menace to their future still lurks in their polluted

blood or in some distant nidus of infection that salvarsan itself might not have reached. They will neglect precautions they might have otherwise observed, will unwittingly run the risk of infecting others with this loathsome disease, and in latter life probably develop some one of its numerous and often intractable forms.

The protection of the public from the merciless exploitation of a great discovery for mercenary ends only, is one more burden and responsibility resting primarily upon the profession. Men who will cure (?) the drug habit with morphine mixtures, inebriety with potions saturated with alcohol, and gonorrhea with a few capsules or injections, will not refrain from deluding the syphilitic, for a price, into believing that the "pox" is now robbed of all its terrors.

Nothing in this paper should be construed as an endeavor to minimize the importance of Ehrlich's great discovery. If it did nothing more than heal superficial syphilitic lesions, as it does with marvelous rapidity, thus often preventing the system being still further invaded, and immeasurably lessening the probability of infection to others, it would be a greatly prized ally in this endless warfare. But its results in all stages of syphilis and in hereditary syphilis have been most remarkable, although as to their permanency a favorable verdict must be withheld until the passing of many years. That there have been many relapses, merely modifies the first extravagant claim that one or at most two doses of salvarsan would permanently sterilize the infected human system. Relapses, promptly identified, are causes for congratulation in so far as they prevent the optimist as well as the pessimist from losing sight of the very great need of conservatism and caution, the application of every known test to discover actual conditions, of strenuous effort to keep the patient under observation and treatment for a considerable length of time, of warning him and the public of the continued necessity for all to avoid acquiring or spreading this horrible disease.

Again, whether we have a specific or not, the profession must

increasingly give its attention to obtaining an exact knowledge of the symptomatology of syphilis. Thousands of unrecognized cases form foci of contagion, and results in late and often serious manifestations. That when recognized syphilis should receive unremitting care and treatment, goes without saying. Morrow is authority for the statement that in New York City there is not hospital accommodation for one in five hundred of the prostitutes who ply their trade there. There should be accommodation provided for such unfortunates, for, if they have not syphilis, practically all of them have gonorrhea—two contagious diseases as deserving of quarantine as leprosy, an even absurd comparison if it is true that 18 per cent. of the people of the United States are syphilized, and 80 to 90 per cent. of males alone, affected at one age or another with gonorrhea. The existence of such a state of affairs is evidence enough that no medicinal remedy or group of remedies, however effective, will ever solve the problem of the control of venereal diseases, or even of syphilis, though we were able to reverse Keyes' pregnant words in his admirable treatise on the subject, words the more forceful coming from a man who gives opinions and reports findings based on 2,500 cases of syphilis observed by his father and himself, and adequately recorded in their office case-books.

These are the words to which I especially refer: "All syphilis is relapsing syphilis. It breaks out when and where it will, and no man shall say when it is finished. One may cruelly but truthfully say to the patient who asks for an absolutely accurate prognosis of his disease, I will tell you whether your syphilis is grave or not after you are dead. Prognosis, in a certain sense, we can assuredly give; but swear, and sign, and seal, we never can."

Venereal diseases do not seek men, but men go about ignorantly and constantly exposing themselves to the chance of infection. To cut off the branches by curing the infected individual (if one can), will not reach to the root of the evil. Like the reglementation of the prostitute, the withdrawal of the syphilized for treatment will leave more room for the new supply

and demand. Not that all possible measures of control should not be taken, but that we should above all else, educate our youth of both sexes from the cradle up in the truths of right living and its rewards in the sexual as in any other sphere. They must also learn the perils of ignorant rashness and wilful wrong-doing; but it is not by penalizing the passions they will be bridled and bitted. Where there is no will to do right, there is no security, though the ways be many by which evil may be escaped. The cultivation of clean manhood and womanhood through right knowledge and discipline must precede, as it must paradoxically accompany, the cleansing of the Augean stables of sexual filth now threatening to increasingly contaminate all classes of society.

Let us hold first to this rule of action while using salvarsan and every other beneficial new and old discovery, hygienic measures, legal enactments, all that science and altruism can suggest. The ultimate results in generations to come do not concern us, are none of our business, compared to the duty laid upon us in the passing hour. Wrangling and speculating over them, we waste time we had better devote to work for practical betterment along the lines indicated, as knowledge and opportunity serve us, gratefully recognizing that logical necessity which automatically forbids the real failure of any laudable and persistent effort.

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THE SPIRIT OF THE HOMŒOPATHIC MATERIA MEDICA.

BY JOHN H. CLARKE, M.D.

When an allopath is first confronted with Hahnemann's *Materia Medica Pura*, he cannot tell what to make of it. It certainly is not literature. It says little or nothing about the diseases which each remedy will cure; it offers no scientific theories to explain how the remedy acts; it simply presents the reader with a bare list of symptoms! From the allopathic standpoint this is at once ludicrous and contemptible. And if the reader's glance should first alight on one of those "funny" symptoms, which we know are of such enormous importance in prescribing—like the "imagines himself made of glass" of *Thuja*, for example—an explosion of merriment is very likely to arrest all further desire to explore the new domain.

But let us look a little closely at these symptom-lists of Hahnemann and see if we can discover something of their essential import.

Taking a broad view of the field we find, first of all, that the symptoms are arranged in a definite order. This order is mainly anatomical, and, as a result of this, it is possible to find all the symptoms of any drug which are related to any particular part of the body.

These symptom-lists, as we all know, are a record of the effects of the various drugs as observed in the persons who have tested them, by taking the drugs when in health. But the order in which they are arranged in the *Materia Medica* is not the order in which they occur in the provers. This has given rise to no little criticism on the part of some authorities. This is not "scientific," say they. But theoretical questions do not

enter here; the only point we have to consider is: Are the symptoms available for individual use, in their individual capacity? Or, in using a symptom is it necessary to have not only the symptom itself, but the other symptoms of the prover, in the same sequence in the case we are treating, before we can successfully prescribe the remedy? The only test here is the test of practice. That test answered for Hahnemann, and it answers for us, that each individual symptom has its face value for prescribing purposes, independently of the other symptoms it may have been associated with in the prover who first noted it.

Therefore it follows that Hahnemann's arrangement, like most of his practical deductions, is the truly scientific one.

Now what is the result of all this? It is really, when we come to look at it, of most tremendous importance. The whole life and soul of homœopathy resides in it. *The Spirit of Homœopathy is the Spirit of Liberty.* The beauty, the grandeur, the glory of homœopathy is its *freedom*. If we were tied up to the "scientific" explanations of drug actions which appear in allopathic text books; if we were tied up to any sequence of occurrence as the symptoms appear in the day-books of the provers, the uses of our *Materia Medica* would be so curtailed that our liberty would not be worth a moment's purchase. As it is, every individual symptom of the *Materia Medica* is a separate coin stamped with nature's own insignia, and available always for its face value.

We all know the difference between paper bonds and liquid assets, and how convenient it is sometimes to convert the former into the latter. Well, in Hahnemann's *Materia Medica* we have the drug powers of the world converted into liquid assets, with the individual advantage, that no matter how much we spend of them, the funds are never exhausted. On the contrary, the more we spend the more we possess.

Take another and allied simile. You know the old adage: *Corpora non agunt nisi soluta*—"Bodies don't act except in solution." It is not absolutely true, but it is true enough for our purpose. Look at the difference between ice and water for

instance. Ice has a thousand uses—but we must turn it into water before we can wash our hands with it or sail our ships, or make our tea, or quench our thirst. In the matter of utility and adaptability, compared with anything else which the world has produced in the way of books on drugs, the Homœopathic *Materia Medica* is as water compared to ice.

Let us take Hahnemann's account of a drug and follow it symptom. What do we find? It is not exactly an epic poem that we read, but there is in it something of the epic nevertheless; for every line of it, every individual symptom is instinct with life. It is indeed the reaction of the living human organism against the assault of the drug, willingly encountered by the prover. The Homœopathic *Materia Medica* is built up, in the first place, of the sufferings of Hahnemann and his friends, accurately observed and recorded. So that the spirit of the Homœopathic *Materia Medica*, in another of its aspects, is the *spirit of self-sacrifice*—which is the spirit of life itself.

How different is this from the spirit of the so-called "scientific" *Materia Medica* of the present day! In these we have all drug reactions reduced to terms of the pneumogastric nerve, and built up on a foundation of experiments on animals. You have heard of the man who approved of a certain war, and was so keen about it that he was willing to sacrifice every drop of blood his wife's relations possessed rather than that the war should not be prosecuted. I am reminded of this man when I think of the methods of research adopted by old school pharmacologists. They seek their ends through the sufferings of any creature except themselves. And I am not astonished at the poverty of curative results they have to show for their labours. Hahnemann on the other hand, like Pope, concluded that the "proper study of mankind is man"—not dog or cat or frog. And as Charity is said to begin at home, so Hahnemann made his first experiments on himself. In the aches and pains of his own organism he spelled out for the world the first chapters of the new language of drugs.

I have recently noted in the *British Medical Journal* some

quite pathetic articles lamenting the decay of clinical medicine, and the tyranny of the pathological laboratory. It is urged that *patients* should be studied rather than *diseases*, that the art of prescribing should be restored to the medical man, and that the practice of medicine should be really taught in the schools, rather than be left to those excellent young men who travel for Messrs. Burroughs & Welcome and the other wholesale drug houses. Now, for my part, I have very great regard for these same excellent young men ; and though I fully sympathize with the *British Medical Journal* in its lament over the lost art of prescribing in the Allopathic school, I am bound to point out to the *Journal*, that until the school it represents is willing to learn from Hahnemann, and to accept the liberty he won for the practice of medicine, the sensible general practitioner will be wise to rely on the intelligent traveller for his clinical instruction rather than on his *Materia Medica* professor. For it is Hahnemann who first showed us *how to study our patients* as well as *how to study our drugs*. It is all very well for the *British Medical Journal* and its friends to appeal for the study of the individual patient, but so long as they refuse to accept the only method which has been discovered by which this can be accomplished, there is no hope for them. They remind me of a man lost in a forest—utterly unable to find a way out. After wandering round and round in hopeless attempts he finds himself very near the point from which he started, when a stranger appears on the scene. The stranger knows every tree of the forest and offers to lead the lost one out into the open. One would have thought that Perditus—as we will name him—would have jumped at the chance, and have accepted the offer with the utmost gratitude. But not at all ! On the contrary, he begins to ask questions : “Are you an authorized guide ?” he asks. “My only authority,” replies Ignotus, “is my knowledge of the way.” “Is the way easy !” “No ; it is somewhat difficult ; but you know the old adage *Per aspera ad astra* !” “But what is the name of the way ?” “It is called, *via homœopathica*.” “Good gracious,” he replies, “you don’t ask me to go *that way*.”

"It is the only way, nevertheless." "But what is your name?" "My name is Hahnemann." "Oh! horror of horrors! get out of my sight, and leave me to live in the forest on such roots and nuts and fungi as I can find, or die in the odour of orthodoxy."

But Hahnemann will not leave him there for all that. He commands us who have trod the way after him to go and fetch him out. That we haven't done it yet is patent to everybody. That it is an integral part of our duty to do it, is equally undeniable. Homœopathy is destined to spiritualize, to civilize medical practice. That the medical practice of the old school is barbarous and chaotic enough at present we have the allopaths themselves to testify. In fact it is *in extremis*; and medicine's extremity has proved to be surgery's opportunity. Surgery has reached a degree of perfection which can hardly be bettered, and the ready recourse to surgery in modern times is an irrefutable evidence of the failure of medicine. It is the bounden duty of homœopaths to remedy the state of affairs. Hahnemann has forged for us the instrument—his *Materia Medica*—we cannot make use of it for our own private ends, and make yet no effort to rescue by its aid some territory from the realm of chaos. And we must not attempt this without counting the cost. The cost is not very great, it is true, but it is not very pleasant.

As the spirit of the Homœopathic *Materia Medica* is the Spirit of Liberty, as Liberty is only gained at the cost of self-sacrifice, so only is it maintained. Homœopathy demands of its practitioners a life of self-sacrifice.

The hunt for the similimum is often exciting enough, but it is frequently also not a little arduous, and roughness of the road is never an excuse to the true homœopath for failure to secure the prize. There are few pleasures in life comparable to that of the homœopath who sees disease vanish under the remedy which he has prescribed after, it may be, a prolonged, arduous and careful search. Frequently the remedy is easy enough to find; but the true homœopath must be ready for the difficult cases as well as the easy ones. If he is to be ready for them he must be of those who know how to "scorn delights and live laborious days,"

and to take his highest pleasure in the good which therefrom results.

But not only does the practice of our art demand self-sacrifice ; so also does its propagation.

In a recent number of the brilliant little journal of our French and Swiss Confreres *Le Propagateur de l' Homœopathique* is a moving and pregnant article by that fine clinician, Dr. J. Favre, of Toulouse, entitled, "Vers la lumière." Dr. Favre points out that Homœopathy has passed through two periods of the past and is now in a third. The first period was one of zeal, persecution, brilliant success and rapid augmentation of numbers. The second period produced many great names but no material increase in numbers. The third period has now lasted only a few years. It has been marked by an influx of medical men into our ranks, and by a movement on the other side towards homœopathy.

"We are coming to you," said a distinguished professor of the Faculty of Toulouse to Dr. Favre the other day, and Dr. Favre says he is proud to accept the augury. But he adds these weighty words.

"Must we, on this account, rest on the positions we have won, and wait without striving for the day of triumph? By no means! We must work, strive and suffer yet more. *Let him who cannot suffer unjustly not think of making himself a homœopath.* (Que celui que ne sait pas souffrir injustement, ne se fasse pas homœopathe.) We are an elite minority, so be it ; but we are still ill-understood and too often, alas ! ill-appreciated.

I despair of doing justice to the beautiful language of Dr. Favre in my crude translation, but the sense is clear enough, and I hope it will be taken to heart by all at this World's congress. For it is a message to homœopaths all over the world.

I have known homœopaths who smart under the sneers of their orthodox acquaintance and who let those sneers shape their conduct. These are not worthy of the high mission they have assumed. I can understand a man being ashamed* of his own interpretation of homœopathy, of his own imperfect practice

of it. I often feel that way myself. But I cannot understand anyone who has once apprehended the spirit of Hahnemann's great revelation ever for one moment being ashamed of homœopathy.

And yet there are some homœopaths who are so much under the denomination of established orthodoxy that they think it infamous conduct, and a slight on the profession, to let the public know that homœopathy is more successful in curing the sick than the thing called orthodox medicine.

The spirit of the homœopathic *Materia Medica*, the spirit of homœopathy that is, is the spirit of Liberty, the Spirit of Truth, the Spirit of Self-Sacrifice. Absolute allegiance is the smallest homage it can demand. No trouble, no suffering must be counted in its service, or in the cause of its advancement. If we are not worthy—if we lack the courage of crusaders—let us abandon the task of our civilizing spiritualizing mission into the hands of others who *are* worthy.

Que celui qui ne sait pas souffrir injustement, ne se fasse pas homœopathe !—The *Homœopathic World*, October 2, 1911.

EDITOR'S NOTES.

Smoking Automobiles.

Fines are being inflicted—and collected—against drivers of automobiles who permit dense smoke to issue from their exhaust pipes in any of the metropolitan thoroughfares. Health Commissioner Lederle has within two months obtained convictions in 450 out of 520 cases; in one day 25 arrests were made, and in all but one of these cases the drivers were convicted and fined. Such bodies as the National Highway Protective Society are behind the New York City Health Department in these prosecutions, which are commended by all decent motor car owners. Possibly there are other municipalities throughout the state that are afflicted in the same manner by this nuisance, which, like all nuisances, is a menace to communal health.—*The Medical Times*, June, 1911.

Feminine Athletics.

The physical directors of woman's colleges have now an excellent opportunity to note the powers of endurance displayed by young woman athletes; and this opportunity has at any rate been seized by Dr. D. A. Sargent of Harvard, who has made some important observation. There is, for example, the case of Miss Rose Pitonoff, who swam twelve miles to Boston Light in water ranging from 49 to 59 degrees, and later repeated the performance from New York to Coney Island Light—on each occasion without the slightest ill effects. In the swimming at Boston this fifteen-year-old girl made over 14,000 breast strokes at a rate of 39 to the minute, without rest or change. It is probable a trained male swimmer (assuming he could accomplish the feat) would be incapacitated for days after; yet this young woman suffered no physical lameness or fatigue. It has oftentimes been observed that the "weaker sex" are more enduring than men. Their usually lighter dresses testify that they can better resist cold.—*The Medical Times*, June, 1911.

Color-Blindness in the Male.

Color-blindness in the male is eight times as frequent as in the female, recently declared Prof. E. B. Wilson, of the Department of Biology at Columbia University. He emphasized, moreover, that man is hybrid; woman on the other hand is complete, in harmony with creation. (Thus does science vouch for what everybody has gratefully realized since the beginning of time.) Color-blindness is a sex limited affliction; eight times as many men are color-blind as women. A man may inherit color-blindness from one of his parents; it takes two to transmit this defect to the daughter. If a color-blind man marries a woman, not color-blind, all their grandsons will be color-blind, but their granddaughters will be able to tell green from yellow—they will know what should go on the Easter hat. Their daughters will escape color-blindness; but their sons will see no difference between the colors of a crow or a parrot. And the daughters of these sons will have a complete color sense. Prof. Wilson used the term hybrid as applied to the human male to mean that while the number of chromosomes which determine a woman's sex are always equal in number for women, men are born only when fate uses an extra chromosome. Man is the product of an odd number of chromosomes.—*The Medical Times*, June, 1911.

Plague and the Marmot.

Dr. Morrison of the *London Times*, who is investigating the plague in Manchuria, states that the marmot is known to the Mongols by the name of tarbagan, and exists in immense numbers in the country traversed by the Manchurian railway. This rodent is subject to that form of plague which is associated with the respiratory tract. The tarbagan hibernates from October till April; it is attacked with plague in September and October. Those that die perish in their burrows and there infect (precisely how is not known) the succeeding generation that resorts to the same burrows in the next hibernating season. It is hunted in April, May and June; it breeds in July and August, and is again hunted in the weeks preceding its hibernation. For years plague has been endemic among these rodents; Mongols and Buriats, who formerly hunted

them for Russian dealers, could tell what animals were infected, and these they left severely alone. But when the trade assumed increasing importance and demand for skins increased in Europe, then Chinese were attracted to the chase. They came in hundreds, and then in thousands; they had no experience and, being ignorant of the plague, they handled the plague-stricken, and were infected. The manner of their infection is still undetermined; but evidence points to direct inoculation in the process of skinning. There is as yet no available evidence that the marmot had bubonic plague nor that it was the host of a flea or other blood-sucking parasite. Hunters live upon the flesh; but direct intestinal infection is believed not to occur. While the hunters are afield they do not suffer from the plague; the disease only manifests itself when they come back for the winter.—The *Medical Times*, June, 1911.

Blood Changes in Workers with Roentgen Rays.

Nicholaus V. Jagic, Gottwald Schwarz, and Leo V. Liebenrock (*Berl. klin. Woch.*, July 3rd, 1911) have examined the blood of a number of "Roentgenologen," and others exposed more or less in their work to small but frequent doses of Roentgen rays over long periods of time, and set forth their results. They were led to this investigation by the fact that one of them (G. Schwarz) had observed a case of leukaemia in a chemist whose business exposed him for a lengthened period to radium emanations. Other cases of death from leukaemia of workers with Roentgen rays have occurred; also exposure to Roentgen rays may cause changes in the blood in normal individuals. It is clear, remark the authors, that the protective measures employed by workers in Roentgen-ray laboratories are not completely effectual. They are exposed to a small proportion of the primary rays which filter through the interposed media, and also to the secondary rays which permeate the whole room in which the work is carried on to such an extent that a fluorescent screen, although not exposed to any direct or primary rays, is still to some extent excited to action. Altogether, the results of the examination of the blood in ten individuals are given in detail. Most of the cases were men who had worked for years with Roentgen rays, always, except in the earliest years, with protective apparatus;

most of them were apparently in normal health, or complained only of slight general weakness. There was, in all the cases, a slight but definite diminution in the total number of leucocytes in the blood. The number was either below the normal or near the lower limit of normal variation. The diminution was chiefly in those leucocytes which originate in the bone marrow—that is, the neutrophile polymorphonuclear leucocytes. It was a striking fact that the acidophile leucocytes were in some cases altogether absent. On the other hand, the lymphocytes were in every case increased in absolute number in one case to as many as 3,300 per c.mm. In the number of large mononuclear leucocytes no regular alteration was to be made out; the same was true of the red blood cells. It is to be remarked that a relation between the amount of the exposure to the rays and the degree of blood change was apparent to the extent that the case in which the exposure was greatest showed the most marked changes.—*The British Medical Journal*, August 19, 1911.

Rest in Early Phthisis.

L. Cobbett (*Lancet*, Nov. 26, 1910) wisely counsels absolute rest in the treatment of incipient phthisis—a desideratum, indeed, in any stage of that disease. Tuberculosis in man confers a certain degree of immunity; and the hope of recovery depends mainly on the acquisition of the new or improved powers of resistance which (however slight they may be) are the causes of this immunity. Cobbett has injected human and bovine tubercle bacilli respectively in calves and the resulting lesions show that the powers of resistance which develop during infection, and which lead in favorable cases to cure, are partly local and partly general. Experiments on the cause of the local immunity in erysipelas would tend to show that the local powers of resistance become quickened and improved; possibly the endothelial cells become less sensitive to the poison by reason of the development of an antibody, so that they now react by multiplication to a concentration of poison which would originally have caused necrosis. But whether the local powers of defence undergo improvement or not, undoubtedly they hold the disease in check until new or improved constitutional powers have been evolved and so far perfected as to work powerfully for the arrest of the

disease. In man, as in the ox, the severity of a tuberculosis infection is largely determined by the number of bacilli which gain entrance at the start. As tuberculosis runs its course, and the capacity of resistance increases, it will require as time goes on fresh bacilli to infect any new region in the patient's body. Cobbett concludes that resistance to tuberculosis, (like resistance to other infections) is a specific matter, and does not go always (as is generally assumed) with what one regards as the normal bodily health. We prescribe the most nourishing food, fresh air and oftentimes moderate exercise: but Cobbett considers we should ever bear in mind the danger of infection of new areas in phthisis, and do what we can to avoid this at least until the patient has become more immune.—*The Medical Times*, June, 1911.

The Passing of the Common Drinking Cup.

Every citizen of Rhode Island who can boast even a rudimentary knowledge of sanitary laws, will regard with elation the determination of the legislature to abolish the public drinking cup.

It is a wonder that the public drinking vessel has ever survived to become a matter of legislative concern. It should have vanished about three centuries ago, when a squeamish queen ordained the fork successor to the fingers, and damask napkins gradually displaced the convenient dog's back at table. That was the dawn of daintiness, but unfortunately the Western world has been slow to perceive that daintiness is only a phase of self-preservation. The Oriental, in his prismatic display of faults and virtues, was adjured of Buddha to drink only of running water and to carry his own cup. In India the rules of caste have operated similarly, and your Brahmin would go cry through eternity rather than soil his lips upon the cup of an inferior. Elsewhere than by the Ganges, however, cleanliness has been confused with snobbery, and in this light the public drinking cup has remained too long the very chalice of democracy. Our fathers vented much patriotic and vituperative language on Charles Dickens, when he openly put to scorn our public combs and towels, although the star abomination of that day was the tooth brush chained to the wall. This convenience escaped his attention, but was generously prevalent on the oldtime steamboat lines. With

the invention of the collapsing cup with which travellers protected themselves against the assorted salivas of various communities, came the first commercial admission that the public at large preferred an unmixed drink. It has taken the entire bulk of scientific and proven evidence against it to drive this menace from us. Not until the actual germs of tuberculosis were found in the dregs of communion vessels, and diphtheria was known to abide in the common drinking cups of school children, as well as in the mouths of healthy persons, and these with other facts were calmly, indisputably established, did any legislative body in the world take upon itself to wrest the venomous utensil from the lips of the care-free public.—The *North American Journal of Homœopathy*, September, 1911.

Late Pregnancy.

Dr. C.C. Norris, in the *A.M.A. Journal*, reports the case of a woman, aged fifty, who had been twice married but had had no children, though she had been operated on after each marriage by dilatation and curretting and simple dilatation of the cervix without results. Menstruation had continued, usually with but slight discomfort. She had never had severe dysmenorrhœa. The genital organs were rather normal though the os was small. Dilatation was performed and a rather thick Wiley drain inserted ten days before the expected monthly period. The Wiley drain is a sort of groove-stem pessary. Pregnancy followed, with normal labor and delivery. The advanced age is of interest in this case, though menstruation is not uncommon after the age of fifty.—The *North American Journal of Homœopathy*, September, 1911.

Air and Light and Sun Baths.

MONTENUIS (*La Clin.*, June 30th, 1911) considers that the importance of aerotherapeutics is still greatly neglected, and that its value as a hygienic measure is often disregarded. Light baths are an invaluable remedy for the present generation, which is weakened by the inheritance of gout and alcoholism and which suffers greatly from intestinal toxicity and exciting foods. Air treatment is better than hydrotherapy, and is more readily combined with gymnastic exercises. When on the seashore both adults and children ought to indulge freely in light and air bathing. The air bath should be taken early in the morning, when the atmosphere is clear and carries plenty of ozone and when the light is strong. The early rays of the sun

are regarded as the most efficacious. During the day a light bath should be taken; the patient will then walk upon the shore in a thin muslin or calico garment through which the rays can penetrate; he thus obtains the tonic effect of sea water, light baths, and bare-foot walking on the sands at one and the same time. Such methods are regenerating and strengthening, and knowledge of the vigour and healing which can be drawn from them requires to be more generally taught.—The *British Medical Journal*, September 23, 1911.

Revision of the "British Pharmacopoeia."

Although more than thirteen years have elapsed since the publication of the *British Pharmacopoeia* now in force, and changes in the medicines in regular use have certainly not been less in that interval than in any previous equal period, it appears probable that a considerable further time will elapse before the publication of a new edition. Meanwhile the work of revision goes steadily on. A third report of the Committee of Reference in Pharmacy has recently appeared, consisting in part of proposed alterations in monographs not dealt with in the preceding reports, and in part of corrections and further changes in the altered monographs which have already been put forward. The largest group of substances now dealt with is formed by the fixed and essential oils. The progress of analytical chemistry permits of more exact definition being given to the characters which these should possess to ensure freedom from adulteration and the presence of a due proportion of the valuable constituents. Under "*Oleum Copaibae*," the following note appears: "The committee recommends that a complete inquiry be instituted from a medical standpoint into the relative values of the oil and of the resin of copaiba with a view to the possible omission of the present monograph and to the framing of a satisfactory one for copaiba itself." Other important classes of compounds which are included in the report are potassium and sodium salts and many of the syrups and tinctures. Most of the alterations proposed are concerned with details only or with characters which are of interest to the analyst, but not to the prescriber. A supplementary report, dated six weeks later, follows the same lines as the main one, and the reason for their separation is not apparent. Various references to investigations still proceeding appear to indicate that this report is not final.—The *British Medical Journal*, September 2, 1911.

CLINICAL RECORD.

CASES.

BY A. S. ALEXANDER, M.D., C.M.

Case 7.—Mr. R., aged 18½. The rhinologist is more frequently called upon to treat diseases of the internal than of the external surface of the nose. The latter do occur from time to time, and are important, not only on account of the discomfort they cause, but because of their highly disfiguring effect.

A case of this kind may therefore not be out of place. The patient was seen on September 11, 1907, with the following history. Ever since the preceding January, and following a series of colds, he had been suffering from inflammation and swelling of the nose. At first there was a threatening of a large boil at the tip. This never came to a head, but seemed to disperse, giving place to small recurring crops of pustules about the *alæ nasi*, and to the before-mentioned general inflammation. Ointments had been applied with some beneficial effect, but they did not cure. Exposure to cold winds aggravates the condition, but there is little or no burning or itching. There is no nasal obstruction, and the nares are practically normal. The case was repertorized, as well as the local symptoms would permit, for the general health being perfectly good, no guide could be obtained from the constitutional state. The strict Hahnemannian teaching is that all local manifestations result from some constitutional defect, but while this may be true, it is not always possible to trace their remote origin, and then we have to be guided by what external manifestations may be recognized. In the present instance, these indicated nat. carb. Among other nasal symptoms, the drug has the following:—Red nose, with white pustules on it. Inflammation of external nose. Peeling off of dorsum and tip of nose, which is painful to the touch. These symptoms follow those of general coryza, from which the patient had at first suffered, and appearing to correspond pretty closely with the history and present condition, the medicine was prescribed in the 6th dilution.

On October 18, the patient wrote that he was practically well. A month later, he reported that the nose became red after washing

and exposure to cold air, but was otherwise well. He was, however, anxious to be relieved of this occasional rather fiery appearance of his nasal organ, and aloes 12 was therefore given. Rather a strange remedy to give for a nose, some one accustomed to use it for a different anatomical region may exclaim! Nevertheless aloes has a nasal as well as a rectal sphere of action, and was appropriate in this instance, "Redness of nose in open cold air" being among its characteristics.

On January 10, after taking it, a favourable action was manifest, as the redness had all disappeared. A subsequent report a few months afterwards confirmed the improvement, only slight sensitiveness in cold winds remaining.—*The British Homœopathic Journal*, June, 1911. "

Gleanings from Contemporary Literature.

THE MEDICAL TREATMENT OF MALIGNANT DISEASE.

BY DR. LE HUNTE COOPER.

GENTLEMEN,

In the brief time allotted to each of the papers read at this Congress, it is impossible to do more than touch the fringe of the subject of such a wide scope and such vast importance as the one I am venturing to deal with to-day, but it will at least suffice to permit me to launch a very strong protest against the attitude of mind adopted by the profession as a whole towards the treatment of Cancer.

With a very few exceptions, our colleagues remain chained to the rock of ancient dogma, which holds that all cases of Cancer are initially purely local, and that all subsequent manifestations of the disease are due entirely to infection of the system from the original tumour; nor will they allow themselves for one moment to take a broader view of the nature of this affection. It is quite easy to understand that this should have been the opinion held by the earliest observers, who perceived that the first demonstrable phenomenon of the complaint was the appearance of a more or less rapidly growing tumour, coupled with symptoms of general malaise, and that there subsequently followed the appearance of secondary growths at other more or less remote sites in the organism. The natural explanation would at once occur to them that the whole trouble was initially caused by infection having occurred at the place where the original tumour was seen, that the malaise was due to toxic matters produced in, or in the neighbourhood of, the tumour, and that the systemic infection was consequent on some of the cells generated in the tumour becoming detached and conveyed to other organs, where they were capable of proliferating and forming neoplasms similar to the parent tumour. All this would seem straight-forward enough and delightfully simple and obvious, were it not for the fact that it by no means fits in with clinical experience. At any rate, I can say emphatically that it does not do so with mine. I am not at all prepared to claim that secondary tumours are not capable of being formed in this way, for it is fairly obvious that they are sometimes so generated, but practical experience has convinced me that this is not so in every case, and that *it is quite the exception in majority of cases which have been operated upon*. I have invariably found that the most virulent forms of secondary growths are those which follow the removal of the primary growth, and that such secondary growths are peculiarly frequent sequelæ of such operations.

Here I should like it understood that I am referring by "operation" entirely to such surgical procedures as are now almost universally practised, viz., complete extirpation of the tumour and neighbouring tissues and

glands, with a total and blind disregard of the specific constitutional condition of the patient. It is, of course, natural that this "specific" constitutional state should be so disregarded, seeing that it is not believed to have any existence, but that this belief should still remain so firmly rooted, in spite of every-day experience, is to me a never-failing source of the greatest astonishment. The explanation given by the surgeon when secondary manifestations appear after operation is that the cause of such recurrence is due to the patient not having presented himself, or herself, sufficiently early, and that infection must have taken place prior to the operation, or that the operation was not sufficiently drastic in its removal of all glands and tissues likely to have been directly infected from the tumour. If, however, gentlemen, you will cast your minds back to cases you have personally had experience of, you must be able to recall many in which operation was performed at the very earliest possible moment, and with all possible thoroughness, and yet in which secondary manifestation appeared.

In a paper which it was my privilege to read before the British Homœopathic Society three years ago, I quoted some cases in point, one being especially striking, in which the whole breast and all the lymphatics in the axilla and arm were removed for a mammary nodule *which was no larger than half a pea, and which had not had time to develop the characteristic features of a malignant growth, such as adherence to the skin, infected glands, etc.*, nevertheless, the patient died within six months of a disseminated recurrence in the spine. In such an early stage was this case that it was not thought to be malignant, but the surgeon being particularly zealous, and actuated by the most commendable motives, performed the thorough and drastic operation described, believing that by so doing he was giving the patient a better chance of life; yet this lamentable result followed. That such results are by no means infrequent must be admitted by all, though it is rare for a tumour and its surrounding tissues to be so thoroughly extirpated at such an extremely early stage. In fact it would be impossible to get a case in an earlier stage, and it may be taken as in the last degree unlikely that, in this instance, dissemination of cells occurred from the original site. If it is maintained that they were so disseminated, it only shows how hopeless it is to expect to cope with the malady by operation alone.

My own experience in the medical treatment of such cases justifies me in saying that, if, instead of operation at that juncture, constitutional medicinal treatment had been employed, the patient's life would not only have been prolonged, but that the occurrence of secondary growths would almost certainly have been prevented.

And here it will not be inappropriate if I quote a case very similar to the above, which was sent to me by Dr. Arthur Roberts, as recently as the 17th March last. She was a married lady of forty-three, of dark complexion and active disposition, whose past health had been fair, except for Colitis, for which she had been successfully treated by

Dr. Roberts. A week before I saw her, some uneasiness in the left breast attracted her attention to this region, and she discovered a lump. This I found had already reached the size of two hazel nuts, it was oblong and somewhat irregular in shape, of fairly hard consistence and projected upward and outwards from close to the nipple. Some glands were to be felt in both axillae, but they were not tender. In fact, if the case was malignant, it was clear that we had caught it before it had had time to develop incontrovertible evidence of this. It was in fact in a similar stage to that of the case just described, except that the nodule was six times as large.

The consistence and shape of the lump suggested the likelihood of malignancy to me, and the fact that the rest of the breast was free from the irregular worm-like swelling one so often finds associated with simple adenomata, rather supported this view.

Here then we had to face the old problem, whether we would be acting in the best interests of the patient by operating at once. Many years ago I should have regarded this as the only justifiable course; a few years ago, I should have hesitated; but time had served to alter my outlook, and I now felt so sure of my ground, that I refused to take any responsibility for the ultimate results if immediate operation was performed. Further, I insisted that, if, later on, I should judge operation to be advisable, treatment was to be continued for a considerable time after such an operation. This being agreed to, I lost no time in giving a unit dose of *Scrop. Nod.* ϕ to be taken at night on an empty stomach. *This was followed by pain in the affected breast, which came on at 2 a. m. the next morning.* A second dose was given on the 29th March, and was followed by a similar reaction. On the 6th April matters seemed to be hanging fire, and I therefore judged it expedient to prescribe *Scirr.* 200. This I did in nightly powders, medicated in fourths. I followed this up on the 20th April with another dose of *Scrop. Nod.* ϕ with the result that by the 3rd May a very interesting change had taken place in the nodule, in that *it had lost a formerly projecting lower portion which had formed a distinct ledge at one side.* I allowed this beneficial action to continue, and did not again repeat the *Scrop. Nod.* ϕ till the 17th May. This I heard later by letter was followed by tearing pain in the breast for a whole day after the dose. A unit dose of *Scirr.* 100 was then given on the 31st May, and on the 14th June the patient reported sharp pain as having followed this dose, also, for two days. The tumour, I now found, *had flattened down to half its original thickness,* though it covered much the same area. No further medicine was given, and on the 27th June the breast was practically normal; in fact, had I not known where to feel, I should not have detected any difference between the former site of the tumour and the surrounding tissues.

I quite well know the answer to all this. The proverbial solitary sal-low who became confused by the vagaries of the English climate will be quoted. It will be said that, of course, the case was one of simple

adenoma, and that it proves nothing. My answer to this is that my special fallows are steadily collecting in to a very respectable flock, adding those I have already published to others which I have not hitherto recorded. That my former published observations on undoubted malignant cases give the lie to those who say that "because the tumour disappeared it therefore is not cancer," and that the fact that the case immediately reacted to the nosode *Scirrhinum* is strongly suggestive that this particular case was one of genuine malignancy. Added to this it must not be forgotten that *the old school deny that any tumour, simple or malignant, can be acted upon medicinally*, with the exception, of course, of *Gummata*.

And now as to the all important question of operation in cases of malignant disease. There is no more firmly rooted conviction in the professional mind than that, by delaying operation, we are endangering the patient's life. This has been the academic teaching of the past, and so emphatically has this tenet been laid down by teachers in the Medical Schools, that to dare for one moment to suggest otherwise would effectually plough a candidate aspiring to medical degrees. The result of this is that the diagnosis of Cancer is no sooner made than operation is at once resorted to. There is consequently no opportunity for medical men to judge of the course of the disease when treated medicinally, except in cases which are too far advanced for operation, and which are necessarily most unfavourable for treatment. Hence, no progress in this direction has hitherto been possible. I do not suppose that anyone more implicitly believed this doctrine than myself, when I left the medical schools, and it was only when I came to draw deductions from the evidence of my own senses that I began to doubt the correctness of this view.

I ask you, Gentlemen, for one moment, to free your minds from the old preconceived views, and to regard the situation from an entirely different standpoint. Let us suppose that instead of cancer being at its commencement purely a local disease, a deep seated constitutional dyscrasia is primarily responsible for its incidence. If we once admit the possibility of this, it must enormously modify our conception of the right course to pursue in its treatment. For, in this case, the tumour we see would only be a manifestation of the constitutional state, and remove it in the hope of curing the disease would be irrational in the extreme. Again, once allow that removal of this primary neoplasm tends to the production of more virulent manifestations of the disease later (and I do not think that anyone who calmly reviews the results of his own experience can doubt this), the possibility, and indeed the probability, at once occurs to me that the primary tumour may actually be a relief to the systemic condition.

The importance of such a conception cannot be over-rated, or if it has a shadow of foundation in fact, then one would most certainly not be acting in the best interests of the patients by performing an operation on a tumor at a time when it was functioning as a safety-valve to the system.

I know perfectly well that anathema and obloquy are the inevitable rewards of anyone who dares to breathe a word which tends to cast a

doubt on well-established pre-conceived doctrines. But *when practice based on such doctrines hopelessly fails*, and one's personal experience points to the probability of these doctrines being fallacious, I consider that one should not hesitate to state one's view in the hope that calm unbiassed discussion will ultimately result in an arrival at the truth; for it is only by arriving at the true nature of the disease that we can ever hope to master the problem of its cure.

From the above it might be inferred that I am entirely opposed to operation in this disease, but this is not so, what I am opposed to is operation at the stage at which it is usually performed, *i.e., when the tumour is rapidly growing and before any systematic treatment is adopted*, for it is in these cases that I have seen such unhappy results follow. You may remove an old slowly-growing scirrhus mass with comparatively little danger to the system, but I maintain that *a very grave risk is incurred in removing a rapidly growing cancerous mass, shortly after it has appeared*. On the other hand, if control of the disease is first obtained medicinally and such measures are continued after the operation, the risk of removal is reduced to a negligible quantity.

It is an astonishing thing how strenuously it is denied by the profession at large that cancer can be acted upon, or even modified in the slightest degree, by drugs of any kind, and how few medical men think it worth while even to attempt to combat the disease in this way. But still more astonishing is it that they not only rest complacently on their couch of erroneous conviction, but they heap insult and contumely upon the head of any one who dares to make such an attempt. Times without number patients have come to me saying, "I have been told that I am suffering from cancer. My Doctor says that nothing can be done, and that it is useless to attempt to do anything," and the typical reply one receives to the question, "Did he send you to me?" is "Oh, no, on the contrary, he most strenuously opposed my coming to you, and said things about you which I would not like to repeat." So that one not only has to bear the strain and unpleasantness of treating such cases, but one is regarded in the light of a social leper for doing so. Yet the public at large wonders why so little progress is made in the treatment of malignant disease! Now in order once and for all to answer the question "Can any case of genuine cancer be acted upon by internal remedies," I read a paper before the British Homœopathic Society in 1903, entitled "Curative Force and its Scientific Induction," in which I minutely detailed a case in which Laparotomy had been performed by Mr. Bland Sutton, and a Colloid Carcinoma of the Great Omentum found which was inoperable. The abdomen was closed and tumour continued rapidly growing, till it practically filled the whole abdominal cavity, yet from the time of commencement of treatment, the tumour not only ceased growing, but steadily diminished to one fourth its original size, with a progressive improvement and increase in weight in the patient; the fact that sudden heart failure ended the scene at this juncture in no way lessened the importance

[of the case as evidence of the point at issue. This case was watched by an Old School practitioner, who had been in attendance prior to my arrival on the scene, and although he at first scouted the idea that anything could be done, he later fully confirmed the above-mentioned result. Another case, genuineness of which could not be questioned, was one I reported some five or six years ago to the Cooper Club, in which a recurrent Epithelioma in the face, in a man of seventy-two, which had advanced too far for operation, completely disappeared in a few weeks; the patient being still in excellent health and having shown no signs of return of the trouble. These cases therefore once and for all answered this vital question in the affirmative.

Following on this, I read a second paper in July, 1902, before the Society on the treatment of cancer in the breast in which I related cases of Mammary Carcinoma treated medicinally, in which the disease was controlled, and in some cases eradicated, and although this was two years ago it is interesting to note that in none of the former have any signs of secondary growths yet been in evidence. In addition to this, I have published cases of cancer affecting the stomach and intestines, in which the disease has been effectively eliminated from the system by medicinal measures, the patients having made good recoveries.

And now as to the process by which cure is brought about in medicinally treated cases, it seems fairly obvious that once one has succeeded in stimulating the latent recuperative forces in the system, there are only two ways in which they can act, the first being by an increase in the activity of the normal cells adjacent to the tumour, which by forming a barrier round the tumour stay its progress and tend to its subsequent exfoliation and necrosis, while the second is by direct absorption through the blood stream, assisted possibly by the lymphatics, with subsequent elimination from the body by the usual excretory channels. As may be imagined, the strain on the system in the latter case is very severe, especially when the growth is a large one, and this was well exemplified in the case of Colloid Cancer already mentioned. In this case each individual dose produced a definite reaction, showing itself in temporary lowered vitality and increased intestinal activity, this reaction being followed in its turn by improvement in the whole general condition of the patient, and decrease in the volume of the tumour. Such a result as this is eminently desirable, but it often happens that the latent forces which are responsible for these effects are not capable of stimulation to the point of actually inducing absorption, or exfoliation though they can largely control the further progress of the disease. It is in this class of case and when definite control has been obtained, that I consider recourse to local measures may be undertaken with great benefit; and this especially applies to Mammary Cancer. For some unexplained reason it is often very difficult to induce absorption when the tumour is located in the mamma, though its growth may be controlled fairly easily. When as is sometimes the case, treatment results in growth being shrivelled,

down to an inert nodule, even though it may have been rapidly growing before, I have found no harm result from leaving it in situ. On the other hand, if, though its rapid advance is checked, it gives evidence of slow increase, I advocate removal, with, of course, continuance of internal treatment. The reason for this is that such a tumour may ulcerate and lead to weakening of the patient by septic absorption, and under those conditions, the benefit due to the medical treatment may be counteracted and the resistance of the system so far lessened that secondary manifestations may occur. Nevertheless I have been astonished how seldom such secondary manifestations do occur when medicinal and constitutional treatment are steadily persisted in. Still, it cannot be denied that such a growth if left is a genuine source of danger, and the wisest course to pursue is to remove it. It is, however, one thing to counsel such removal, and quite another to convince the patient of its advantage. For when, as is usually the case, treatment has resulted in the patient feeling well in herself, having gained weight and being little inconvenienced by the presence of the growth, it requires a good deal of persuasion to obtain her consent to an operation. However, there are other local measures which may now be employed with advantage, and this specially applies to *Radium*, which has loomed so largely of late on the medical horizon. I will not enter into this subject, as it is being dealt with fully by Dr. Burford, except to say that it removes the growth by the natural process of stimulation of the healthy cells adjacent to the tumour. I would, however, venture one word of warning in this regard, *viz.*, that the error must not be made of thinking that *Radium* alone will entirely cure a cancerous patient. It will, in many cases, undoubtedly remove the visible growth by producing a local reaction, *but it is doubtful if it is capable of initiating any systematic reaction*, and without this, real cure cannot be effected. One of the main objects I had in view when I went over to Paris recently was to ascertain this very point at the fountain source. I asked this question of Dr. Wickham himself, "Do you find that *Radium* prevents secondary manifestations of the disease appearing later?" and he not only emphatically answered in the negative, but quoted some cases to me in which such recurrences had taken place. Therefore, I say, whatever local measures may be undertaken, *the constitutional condition must be combated by appropriate treatment before, during and after their employment*, this latter being of vital import so far as the complete eradication of the disease is concerned. This treatment by medicine—plus operation—will require many years for its full efficiency to be proved. It is only of late years that I have treated cases in this way, and though they have hitherto done excellently well and have shown no signs of recurrence, very much more time must elapse before one can feel oneself justified in declaring them completely out of danger.

On the other hand, I have several cases, mainly in the gastro-intestinal tract, in which I have succeeded by inducing the system to free itself of the disease without any resort to surgery. Some of these I have published,

but among those I have not hitherto recorded, a few stand out as especially striking.

In June, 1906, I received a letter from Dr. Whiting, of Bishop's Stortford, saying that he was anxious for me to see a man, W.R., suffering from an abdominal tumour, whom the local allopaths had given up. They had sent him up to University College Hospital, where he was seen by Mr.——— who found a cancerous tumour growing from the region of the pancreas. He was informed that the disease had so far advanced that nothing could be done for him, and his vitality had become so impaired that death on the operating table would certainly result, if surgical measures were employed. He therefore, returned home, and had made all arrangements for quitting this world, when Dr. Whiting first saw him.

On the 22nd June, 1906, he was brought to me, in spite of the most strenuous opposition from his former medical advisers. I ascertained that he had been a brewer's drayman, and was thirty-five years of age, that his health had been good till February of the same year, when he had an attack of influenza, which laid him up for a week. He then returned to work, but cutting abdominal pains developed, together with yellow vomit. The bowels, he said, seemed to become blocked when the pain was present.

Dyspepsia was diagnosed, and old school treatment employed without any relief. He steadily lost flesh and became progressively weaker, till one day the above-mentioned growth was discovered. Two stones in weight had been lost in the previous two months, and his appearance, when I saw him, was hopeless in the extreme. He presented all the signs of advanced cachexia, with sunken cheeks, sallow skin, and such extreme weakness that he could hardly stand, and had to be supported when walking. He complained of constant dragging in the epigastrium when on his legs, and occasional darting pains were also present in the same region, especially when the stomach was empty. When lying still at night, or when sitting, he was free from pain, though turning in bed would bring it on. The bowels acted daily, with formed white motions, and his tongue was white-coated. Present weight 10 stone 12 lbs (his former weight having been 13 stone). There had been no vomiting for the last five weeks. On examination I found a large hard tumour free from all signs of fluctuation and occupying the entire epigastric region. It projected anteriorly from the abdominal wall, and gave a dull note over its entire surface on percussion; inspiration and expiration produced but little movement in it. The liver and stomach were of normal size. He stated that the lump had increased with great rapidity in the last month. I prescribed *Ornith. Um. φ A.*, and the man returned to Bishop's Stortford.

30th June, Dr. Whiting reported that the man was more cheerful, in spite of the fact that the tumour was larger and more prominent, measuring $5\frac{1}{2}$ inches laterally, by $3\frac{1}{2}$ inches vertically, and projecting $\frac{3}{4}$ inch.

anteriorly, its lower margin being $\frac{1}{2}$ inch above the umbilicus. Over an oval surface in its centre the skin had become reddened, and dragging pain was felt in this region, though the abdomen as a whole was less tender. No mention was made of any special reaction having followed the dose, though I subsequently learnt that marked exacerbation of the pain had occurred temporarily. Not knowing this, I ventured to give another dose of *Orn. Um. ϕ A.*

4th July.—I received a telephone message to say that the tumour was pointing in two places. The man was suffering great pain, and only passing half a pint of urine a day.

For the pain I prescribed *Euphorbia 3x* to be given every two hours, but only if very severe, and also a poultice of Slippery Elm.

5th July (by letter).—Tumour now raised in the centre, $\frac{3}{4}$ inch, it is purplish-red at this spot, with two yellowish pustular heads, each $\frac{1}{2}$ inch in diameter. Severe drawing pain is felt in the tumour, with rumbling flatus in the bowels, and the patient lies on the back with his knees drawn up. The fæces are now brown in colour, and vomiting of yellow matter, streaked with blood, occurred yesterday. Though drinking much water, the amount of urine is still only $\frac{1}{2}$ pint daily. Thickly-coated tongue. Strength maintained. Later, since writing, the tumour has discharged a quantity of brown matter, which by the microscope is seen to consist of leucocytes, blood and epithelium. Every mouthful of food causes acute abdominal pain. I telegraphed directions for *Nutrient Enemata* to be administered, and a little peptonized milk by the mouth if tolerated.

10th July (by letter).—The tumour, though discharging thick matter, is larger, projecting downwards below the umbilicus on the right side, and upwards towards the heart on the left. Nevertheless, the man feels hungry and looks better, and is now almost free from pain. Bowels acting twice a day. *Orn. Um. ϕ A.*

17th July (by letter).—Discharge profuse and slimy, but the tumour is extending upwards and can be traced as high as the seventh rib. The general condition is encouraging. *Orn. Um. ϕ A.*

23rd July (by letter).—"The growth of the tumour seems to be arrested again, and he has so far gained strength that he can travel to town." He accordingly came to see me on the

30th July, and I found the growth no longer projecting anteriorly, though it still occupied the greater part of the epigastric region. To my surprise, I found it still quite hard, with no sign of fluctuation, and neither probing or pressure brought any more discharge. In other words, it presented no signs of being a simple abscess, as thought at one time it might have been.

The patient declared himself as feeling altogether better, and very hungry. He said he was quite prepared to take some single doses, though he complained that "*each of the earlier powders doubled him up with intense pain*".

After this he had two more doses of *Ornith. Um.* ϕ A. "at intervals of about ten days, and on the

17th August, I heard that he was putting on flesh, that the last dose had been followed by considerable pain, and that the bowels had been relaxed two days after the dose. The tumour was discharging very little, and had remained much the same in size. On the

27th August, Dr. Whiting wrote to say that the man had walked a mile to his house without fatigue. He stated "that the last powder, taken on the 20th, had not worked him so much." Two fresh openings had appeared and discharged, and the tumour was now softer and smaller. On the

1st September, it was reported that very little tumour could now be felt. His weight was, strange to say, 9 stone $5\frac{1}{2}$ lbs., a loss of 11 lbs. since June, though he was feeling so much better. No change was made in the remedy which was continued at intervals, when indicated. He had gained 5 lbs. in weight by the 19th September, and by the 13th October he was reported as able to eat anything. On the 3rd December his weight reached 11 stone 2 lbs., and on the

19th December, he came up to town. I found him a changed man. He had filled out considerably, could walk well and weighed 11 stone 6 lbs. He still felt some epigastric pain, and I found one sinus still discharging slightly, the site of the other former openings being marked by scars. Some induration was present over the epigastrium, but the tumour itself had quite gone.

In spite of a pyrexial attack in June, 1909, during which his temperature rose to 106° , he regained his usual weight of 13 stone early in the same year, and has enjoyed splendid health ever since.

The Clinical Research Laboratories report on the discharge from this tumour is not without interest, and was as follows. "It consists of leucocytes for the most part, but there is a large number of epithelial cells present, which might quite well come from a malignant growth."

On the 23rd November, 1901, Mr. F. E., aged 54, active, dark and below the average stature, came to me complaining of a lump which he had discovered two or three months before, in the right iliac region. He said he could only detect it when lying on his left side, and that it was more noticeable sometimes than at others. He had adopted Fletcher's diet recently and this he thought had made the bowels more constipated.

His family history was distinctly unfavourable, his mother having suffered from gall stones and died of cancer, as did his sister, it being situated in the liver in the latter case. On examination, I found a distinct nodular thickening of the cæcum which was, as he had said, movable. I felt it as he had done more readily when he was in the left lateral position, with the legs drawn up. He admitted to losing flesh lately, but said that he had not weighed himself.

I prescribed *Caroin* $\frac{200}{1.47}$ *Pulv.* *xiv* i every night.

Instead of returning to me, however, he felt so much better that he stayed away three months, and returned on the

22nd February, saying that the bowels acted as though a purgative had been taken, after commencing the medicine, and that they had been more natural since.

This improved action of the bowels, which, as I have explained in previous papers, is indicative that the right remedy has been chosen, decided me in giving a unit dose of the same *Carcin.* 200. The patient returned a fortnight later, on the

1st March, 1910, to say that he had been off to see Dr. Furnival, who found a growth constricting the cæcum, and advised immediate operation. Mr. Dudley Wright also saw him and confirmed this diagnosis, as did Mr. Pepper. I had previously found *Ornithogal. Um.* act well on this portion of the intestine, hence I gave him a unit dose of this. *Orn. Um. φ A.*

6th March.—He said no effect was noticeable till three days after the dose, when he had pain up and down the right side of the abdomen, and some headache. The bowels also acted more freely, with large formed actions. He now had a constant feeling of discomfort in the affected area, with some fulness and heat, but no throbbing. After this, I gave him two unit doses of *Carcinosin* at intervals, and he reported on the

21st March that he had been steadily gaining weight, being now 8 stone 11 lbs.

I had found a gradual, though slight, lessening in the size of the tumour during this time. The two medicines above-mentioned were given again at varying intervals after this, and on the

23rd May, his weight had reached 9 stone 1 lb., and he reported that he had been to see Mr. Furnival, who could not find any tumour now at all.

However, it was there, nevertheless, though being small and very movable, it could not always be detected.

I need not give further details of this case, except to say that he had, besides the above-mentioned remedies, *Iris T.*, and *Polygonum Tub.*, and on the

5th October, Mr. Dudley Wright examined him, and wrote to me saying that "he found a very remarkable diminution in the size of the tumour." Nevertheless, I had difficulty in dealing with what was left of it.

Ruta. Grav. ; *Catalpa. Dig.* ; *Iris T.* ; and *Ocim. Can.* were given at various times when specially indicated, as well as the remedies originally mentioned, without any appreciable diminution in its size. On the

6th April, 1911, the condition was as follows. There had remained for some time a nodule, shaped like a partially flattened marble, it was freely movable, and tender to touch, and the patient was frequently conscious of discomfort in its neighbourhood. All the original thickening of the cæcum had, however, now quite disappeared.

As I have already explained, this marble had proved most obstinate hitherto, and I had begun to regard its further reduction as impossible, considering that it had been reduced to an inert nodule which might be ignored. One day, however, I fortunately elicited the fact that the patient's son was tubercular. This showed a positive family taint, and as it is my practice to attack such a taint when discovered, especially when the progress of a case is "hanging-fire," I gave a unit dose of *Tyber. K.* 200.

The patient later informed me that he felt some constitutional disturbance in the form of headache and general malaise, three days after the dose, but there was nothing else of note. After this I gave a few more doses of the same remedy at varying intervals, with the result that the marble gave up the fight and retired from the field of battle and is now no longer to be felt either by the patient or myself though some faint tenderness indicates its former situation. The general health of this patient when I saw him a few days ago was excellent, his weight had reached 9 stone $2\frac{1}{2}$ lbs., and I expect to bid him good-bye very shortly with every reasonable belief that he will never be troubled by the same malady again.

As that most invaluable of remedies *Ornithogalum Umbellatum* was mainly responsible for the recovery of the two cases I have reported, I should have liked to describe another case of "Cancer of the Pylorus," or shall I say rather "apparent Cancer of the Pylorus," in a lady, which was diagnosed as such by Dr. Mitchell Bruce, and which made an excellent recovery by its aid. I also wished to detail a case of apparent Sarcoma growing from the sacrum, and blocking up the rectum in a young man, which was given up by the University College Hospital, and which also recovered by medicinal treatment alone. One's time, however, is so seriously curtailed, that I must leave these to some future occasion and pass on to what I consider is a matter of the greatest importance, *viz.*, the action of *Ruta Graveolens* in the treatment of Carcinoma affecting the lower bowels. We, as Homœopaths, avoid as far as possible associating any one remedy with any one disease, we all realize that it is the patient and not the disease we are treating, and if we lose sight of this fact, our efforts are very liable to end in failure. But, in the course of time, certain remedies must stand out more prominently in connection with the treatment of certain diseased states than others, as, for example, *Bryonia* and *Rhus* in Rheumatism, though this relative value depends upon many factors connected with the particular case which is under treatment. Such a connection between a drug and a diseased state when discovered should on no account be ignored, for it necessarily must prove of great assistance in the future, provided that it is never regarded as a specific in every case in which such a diseased state manifests itself. In fact, its proper place must be assigned, and its special indications considered, before it can be employed with any justifiable hope of success.

It is only reasonable to suppose that a very large number of remedies may act beneficially in Cancer, but certain of them stand out more

prominently than others, and it is above all essential that we should, as far as possible, apportion their individual spheres of influence and ascertain their particular indications. I recognised, when I first commenced to treat malignant disease, that this was a matter of the very first importance, but it presented very great difficulties, for one had no provings of remedies carried to such a length as actual tumour-production to help one. It, however, seemed to me that very considerable assistance might be gained, by, investigating the specificity of seat of action of each individual remedy, and I have since convinced myself that it is by such an action that these remedies produce their local eliminative effects. If one admits such a specificity of seat of action, and I doubt if anyone can deny this, then it is only reasonable to suppose that such an action may in many instances, take the form of a stimulation of the healthy cells of the particular organ acted upon. Such a stimulation would naturally strengthen the normal cells to oppose disease processes in their neighbourhood, and so tend to the elimination of such processes when present.

In a paper on the treatment of Rectal Carcinoma, which I read before the Cooper Club, and which was subsequently published in the August number of the "HOMŒOPATHIC WORLD" for 1909, I detailed cases of this disease in which Colotomy had been rendered unnecessary by medicinal treatment, the success of this being mainly due to the exhibition of *Ruta Graveolens*. I pointed out that it must be particularly Homœopathic to malignant disease affecting this situation, and quoted from Dr. Clarke's "Dictionary of Materia Medica" the following notes on the action *Ruta* on the rectum. "*Difficult feces, as from inactivity of rectum or (impaction following mechanical injuries), evacuated only with straining. Constipation, alternating with mucous, frothy stools. Slimy diarrhœa, alternating with constipation. Discharge of blood with stool. When sitting, tearing stitches in rectum,*" together with other rectal symptoms pointing to prolapse, etc.

These are surely significant enough, but when it is remembered that *Ruta* is capable of producing the feeling of intense lassitude, weakness, and despair, which is so uniformly associated with the dyscrasia of malignant disease, it can hardly be considered surprising that such benefit follows its administration in these cases. Since reading the above-mentioned paper, I have had other cases which bear further testimony to its value.

In September, 1909, I received a letter from M.J., living in an inaccessible spot in the extreme North-West of England, saying that he had derived such benefit from reading my paper on Rectal Carcinoma and acting on it, that he had decided to travel up to London to see me. He arrived on the

14th September, and then related this strange adventure. He gave his age as 46, and said that four or five years previously he suffered from a congested feeling in the lower abdomen, with some testicular aching on both sides (after micturition), and which stretched upwards from these glands to the lower abdomen. With the help of Dr. Ruddock's book, he treated himself, and was relieved of all trouble for a year. Then, last

Easter (1909), he had severe diarrhoea for a fortnight, the origin of which could not be traced.

It was very violent, offensive and watery, but no blood was seen. He was treated allopathically for this attack. After this, progressive weakness set in, with some upper abdomen pain. Then he noticed that blood was passing with the motions, and that the latter were becoming flattened. He suspected Ulceration, and treated himself with *Merc. Cor.*

He however, became worse and consulted two local medical men, who found a "rectal carcinomatous growth. They sent him to Dr. F., who found the rectum practically completely blocked. He also saw a Dr. W., of Liverpool, who confirmed the diagnosis. He was told that he must have Colotomy performed without delay, and that he could not be expected to live longer than three months. This, in view of subsequent events, I should like to again point out was in the year 1909. He refused to be operated upon, as he recognised that such a procedure would be only temporizing, the growth itself being too extensive to allow of its removal. Then, in spite of purgatives and injections, etc., the bowels became gradually more and more occluded, till *apparent absolute stoppage occurred*. Prior to this he had had *no solid motion for six or seven weeks, and had only seen mucus and blood with traces of faecal matter*. In other words, he had reached the point where life could no longer continue, and it was at the critical juncture that he picked up the "HOMŒOPATHIC WORLD" with my article in it. As it seemed to offer a ray of hope, he took it to one of his medical advisers, a Homœopath; and asked him to prescribe *Ruta* for him. This, however, for some reason which never transpired, he refused to do. The man, however, was determined to try it, and as there was no time to communicate with me, he hunted round amongst the local chemists, till at last, after great difficulty, he obtained some. He did not understand from my paper the size of the requisite dose, but thought he could do no harm by taking $m \frac{I}{IV}$ which he did in a single dose at 2 p.m. on the

9th September. The result he described as *simply miraculous*. At 6 p.m., i.e., four hours after the dose, he *actually passed a formed motion*, and *another at 9-30 p.m.* There was a good deal of pain in the bowels during the night, and he had *another formed motion at 1 p.m. on the 10th, and at 4 30 p.m. still another, the largest, he said, he had had for months*, it being six to eight inches in length, of lighter colour, and with the diameter of a thumb.

Time does not allow of my going more fully into this case, except to say that I found that the growth was growing from the neighbourhood of the prostate and projecting well back towards the posterior wall of the rectum. I succeeded in inducing the throwing off of a large part of this growth, only to discover later that there was more higher up, which it was not possible to detect before. We have had ups and downs, times when the disease seemed to be getting the upper hand, and others when

his forces were in the ascendancy, and he is far from well at the present time. The difficulty in dealing with such a condition at such an advanced stage must be apparent to all, and whether he will be ultimately able to throw it off entirely or not, time alone will show ; but it is sufficiently remarkable that a man suffering from a cancerous growth which had so far blocked up the rectum in September, 1909, that immediate Colotomy was said to be imperatively necessary by so many medical men of repute should be still living in July, 1911, and that the alvine functions should have been carried on all that time without any recourse to operation.

And now if you can bear with me for a little longer I will* describe briefly a case of which I am justly most proud, for it is that of no less an individual than our most admired and respected colleague, Dr. A. R., of Harrogate. He has most kindly allowed me to give his name, as his presence among us to-day, as irrefutable evidence of what Homœopathy can do in these cases, is of the utmost importance. It was on the

7th July, 1909, his age then being 61, that he first applied to me for assistance, by letter. In it he said that he had contracted a chill a fortnight before and had, since then, experienced discomfort in the bowels. A purulent discharge from the bowels was present, which had commenced on the 3rd inst., and this led Dr. F., a local allopathic practitioner, to make a rectal examination. Dr. F. very kindly wrote me a full description of what he found, which was as follows :—

“ Dr. A. R. gave a history of some years’ constipation which had been very much worse of late, and rectal discomfort and pain was present over the descending colon. On examination, the lower rectum was found to be somewhat ballooned, and three to four inches from the anus a large mass, hard, nodular, and immovable, could be detected. It is intimately adherent to the sacrum, and seems to be also adherent to the bladder anteriorly. Practically the entire half of the pelvis is occupied by this mass. The rectal lumen is stenosed, admitting, say, a small lead pencil. Proctoscopic examination shows the mucous membrane at the site of the growth to be ulcerated and discharging pus, and the finger encounters friable tissues and causes hæmorrhage.” He further went on to say that “ he was confident that it was a case of inoperable malignant disease, and that to avoid complete obstruction, which I feel is only a matter of time, and to allow irrigation and prevent absorption of toxins, which his evening temperature and malaise indicate, I advise colotomy. Dr.*R., Dr. W. and Dr. R., Jun., I believe, concur.” I replied to this letter that I did not advise colotomy, except as a most extreme measure. Dr. R. had, he informed me, taken a dose of *Orn. Um.* prior to writing to me, and, as some reaction had apparently followed, I allowed this to act and later repeated it, but as I had been disappointed with this remedy in previous similar cases, I soon put him on to *Ruta*. This he had at various times, as well as *Carsinosin*, *Ver. Alba.*, *Can. Ind.*, *China*, *Aescul. Hip.*, *Bell.*, *Anagal-Arven.*, *Baptis.* and *Kali Carb.* as indicated, as well as a nosodal preparation of his own *Hydrocele* fluid. •

Very shortly after commencing treatment his bowels began to act normally, though he later wished to use olive oil enemata, to which I raised no objection, though I regarded them as quite unnecessary. For a short time he also took Lactate of Calcium, but I do not consider this was of any material assistance. I, however, thought it best to mention such details, insignificant though they are, for the sake of completeness. Had time allowed, I should have liked to trace this case right through, giving an accurate account of the effect of each remedy, but this is impossible. Suffice it to say, that the reports of rectal examinations showed progressive diminution of the growths, and that on the

28th February, of this year, i.e., one year and seven months after the commencement of treatment, I was informed by letter that Dr. F. had examined the bowel and found it quite normal. Dr. A. R., has been able to carry on his practice all this time, and when I last saw him a few days ago, he was in excellent health, except for an old arthritic trouble in the right hip. This you may verify for yourselves, if he is here to-day.

Gentlemen, I was pained to hear after the last paper I read before one of our Societies, that I was accused, behind my back, of romancing, and, as illustrating the attitude of mind with which my statements were received, someone was said to have ejaculated, "Oh if only such things were!" I can only say in answer to this, that all the facts I have stated personally vouch for, and that I have no case exaggerated them, for I have fully recognised that to do so would be to detract enormously from their value.

I do not wish it to be thought that I claim the methods I described of dealing with malignant disease, are by any means ideal. Many decades must elapse before this problem can be completely mastered, but if I have succeeded in bringing into prominence the vital importance of treating the constitutional state which underlies the visible manifestations commonly known as Cancer, and have been able to show that the hitherto hopeless outlook of the profession at large towards the treatment of this disease is by no means justified, then my efforts will not have been in vain.—*The Homœopathic World*, September 1, 1911.

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THE HOMŒOPATHIC TREND IN THE DOMINANT
SCHOOL OF MEDICINE.

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The most striking aspect of the orthodox medical school during the past quarter of a century has been the remarkable loss of confidence in the curative value of drugs. So pronounced is this rise and growth of therapeutic scepticism among the leaders of that School that they seem almost to boast of their want of faith in medicines. This state of affairs is so notorious that it needs no arguing as no one will question the truth of the statement. The acknowledged leader of the English-speaking medical world, Dr. William Osler, now Regius Professor of Medicine at Oxford, recently quoted as his own sentiments, "He is the best physician who knows the worthlessness of most medicines." His successor at John Hopkins, which school is presumed to be upon a higher plane than any other in this country said: "The death-blow came first to polypharmacy; to-day with many, pharmaco-therapy as a whole is almost moribund." Dr. Frank Billings, of Chicago, in his address as president of the American Medical Association in 1903 said: "Drugs with the exception of quinine in malaria, and mercury

in syphilis are valueless as cures." Two years later from the same presidential chair, Dr. John H. Musser, of Philadelphia said: "One sees less and less of the use of drugs." Dr. Cabot of Harvard Medical School, addressing the Boston Homœopathic Medical Society, November 1, 1906 said: "I doubt if you gentlemen realize how large a proportion of our patients are treated without any drugs at all, and how little faith we have to-day in the curative power of drugs." An original thinker in the old-school ranks, commenting on this critical situation in his school says: "It now becomes a question whether the practice of medicine can under such conditions be regarded as a laudable occupation, one, in fact, compatible with the dictates of an honest man's conscience." Methinks I hear some objector say, "Granted, but what has this to do with homœopathy?"

It was because of the same lack of faith in the curative value of drugs that we are now witnessing on the part of the entire orthodox medical world that homœopathy itself was founded. Hahnemann in his letter to Hufeland in 1808 wrote: "It was painful to me to grope in the dark, guided only by our books in the treatment of the sick, to prescribe according to this or that fanciful view of the nature of diseases, substances that only owed to mere opinion their place in the *materia medica*. I had conscientious scruples about treating unknown morbid states in my suffering fellow-creatures with these unknown medicines, which being powerful substances, might, if they were not exactly suitable, easily change life into death or produce new affections and chronic ailments, which are often much more difficult to remove than the original disease. To become in this way a murderer or aggravator of the sufferings of my brethren, of mankind was to me a fearful thought." Were these bold condemnations of the practices of that day just? The whole world now one-hundred years later knows that Hahnemann was right. Is it possible that even to-day, health and life are being injured and destroyed? Isn't it truly "a fearful thought?" While the leaders of the dominant school have after a century learned the futility and harmfulness of the old methods and so

are "ceasing to do evil" by giving no medicine, the rank and file are not yet blameless. Though the old complacent faith in the compound mixtures of other days has almost been annihilated among the intelligent and discriminating, there is nothing to take its place with them for the very good reason that there is one true and sure way of using a drug for its curative effect and that is the homœopathic way as many of them realize. The physiological school of therapeutics headed by Prof. H. C. Wood of the University of Pennsylvania was a great advance over the vile nauseous compounds which have not entirely become obsolete even yet. Wood was almost as eloquent in his arraignment of the medical practice of his day as was Hahnemann. In his Text book of Therapeutics we find this wholesome and suggestive statement: "Therapeutics developed by empiricism or clinical experience alone cannot rest upon secure foundation. Experiments made upon the lower animals or upon healthy human beings are the only rational scientific groundwork for the treatment of disease." This effort to learn the pure and positive effects of drugs has contributed much to our knowledge of drugs and added to the resources of the physician when he wishes to use drugs for their physiological effect. For example the use of amyl nitrite in the agony of angina pectoris, chloroform or ether as general anæsthetics, morphia to relieve pain and produce sleep in suitable cases or the common use of physiological doses of digitalis to palliate a failing heart.

To show how nearly Wood came to attaining the secret of curative medicine but just missed it I shall quote from something Hahnemann wrote in 1825, "On the Contrast of the Old and the New Systems of Medicine:" "Now it is impossible that the alterations in man's health which medicines are capable of producing can be known and observed more purely, certainly and completely by any other method in the world than by the actions of medicines upon healthy individuals. Even when given in human diseases in order to ascertain their effects, the peculiar symptoms which were solely due to the medicine can

never be distinctly recognized, never accurately distinguished, amid the tumult of the morbid symptoms already present so as to admit of our ascertaining which of the changes effected were owing to the medicine, which to the disease. Hence not the slightest claim to a knowledge of the pure action of the various medicines can be made by the ordinary *materia medica* which has scraped together its fables respecting the virtues of drug from the confused use of mixed medicaments in diseases." While the physiological school succeeded in undermining the complacent faith in Galenical methods yet its substitute of a therapeutics based on gross physiological effects has proved fallacious by experience as the therapeutic skepticism of that school testifies. But though the physiological school has proved woefully disappointing to those who cherished the hope that at last a scientific therapeutics was at hand yet the study of the physiological action of drugs has not been entirely fruitless. It has contributed to a more intelligent palliative use of drugs when palliation rather than cure is the indication. I hasten to insure the ultra-homœopathist that I have in mind such physiological effects as the use of chloroform or ether as general anæsthetics, or the nitrites in the paroxysms of angina pectoris, atropia to dilate the pupils, cocaine as a local anæsthetic, etc. Of course the tendency is to abuse this physiological use of drugs and neglect the curative treatment but this abuse should not deprive the physician, be he homœopathist or non-homœopathist, of the occasional boon to his patient to those physiological effects for they are as much without the realm of curative medicine as is the use of a general anæsthetic. Likewise they are just as much neutral property so far as schools are concerned.

It was discontent with the prevailing therapeutics of his day that led Hahnemann to make his discoveries, and just so was this state of dissatisfaction which has been noted which will lead to a sincere investigation of what homœopathy has dominant offer. Never in the history of homœopathy has dominant medicine been in such a state of receptiveness as to-day. This receptiveness is not only because of the lack of faith in old

therapeutics but more especially is it due to the independent re-discovery and confirmation of homœopathic tenets. For example, "vaccine" therapy holds so important a place in therapeutics that it has been referred to as a new era in medicine. No thinking person will be misled by this word to-day though it has little or nothing to do with vaccination. Just as we no longer hear the make-shift "horse-less carriage" so will the etymological absurdity "vaccine therapy" disappear as a generic name for this method of treatment. Let us pause long enough to study the origin of this term vaccine therapy. When Pasteur in 1880 was trying to persuade a scoffing and bigoted medical profession the value of his immunizing methods in fowl cholera, hog cholera, and anthrax in sheep and cattle he met with ridicule. Pasteur was a biologist and chemist and devoid of medical class-room knowledge, but it was this very freedom from prejudice that permitted him to see. He said in effect you medical men have been practicing this principle since Jenner's discovery now about a century and have found it effective. My method is analogous to Jenner's inoculation with cow-pox, a similar but less virulent disease than small-pox. In other words, I am able to protect from other infections in the lower animals exactly as Jenner protected from the small-pox in man by vaccine. Pasteur used the word "vaccine" not as the proper descriptive term for the principle and applicable to all cases but because medical men and laymen, too, were already familiar with that specific instance.

Now that vaccine therapy is becoming co-extensive with infectious disease itself, clearly a generic term will eventually come into use and replace the word "vaccine" which has served its purpose in that the principle itself has at last come to be fully recognized. Not only is Pasteur's principle secure in orthodox medicine to-day but the pendulum has swung to the other side and things are called vaccines which strictly speaking are not properly vaccines. I wonder if the difficulty of formulating the appropriate word is the reason for the continued use of the word "vaccine?" If so, Prof. Von Behring could

suggest the word perhaps. He says "In spite of all scientific speculations and experiments regarding small-pox vaccination, Jenner's discovery remained a stumbling block in medicine till the biochemically thinking Pasteur, devoid of all medical classroom knowledge, traced the origin of this therapeutic block to a principle which can not be better characterized than by Hahnemann's word homœopathic. Indeed what else causes the epidemiological immunity in sheep, vaccinated against anthrax, than the influence previously exerted by a virus similar in character to that of the fatal anthrax virus? And by what technical term could we more appropriately speak of this influence exerted by a similar virus than by Hahnemann's word homœopathy."

It should be recalled that Pasteur was not a medical man at all and was not interested in names for his discovery but in the discovery itself and its promulgation. Whether Pasteur realized that homœopathy best characterizes the principle he had discovered or not we may be sure that he was only interested in seeing his discovery utilized for the good of mankind. It was difficult to gain a hearing in orthodox circles without the added handicap which the word "homœopathy" would have injected into the controversy. Hence Pasteur wisely adopts the non-committal "vaccine" with which the medical world was already familiar though it remained a therapeutic stumbling block as Behring says. But the use of the tuberculin for the cure of tuberculosis is not at all analogous to the vaccination, and tuberculin or any of the numerous modifications unless they consist of living attenuated bacilli are not "vaccines." The living attenuated bacilli are actually used to produce bovine immunity and this is properly vaccination but so far as I know living, attenuated bacilli have never been essayed in the case with human beings. Pasteur's discovery did not compromise or contemplate dead organisms or their products to treat the disease. It is inexcusable to continue Pasteur's merely provisional name "vaccine" as a generic name but to attach this name to the treatment simply because the remedy has the

quality of similarity to the disease is a cheap expedient to evade the simple truth and the most appropriate word.

Let us examine another method of treatment sometimes loosely referred to as an example of vaccine treatment. I refer to serum therapy. There is a lack of unanimity regarding the mode of action of antitoxin, a name given to it by its originator Von Behring. As the name suggests and we are taught, its efficacy lies in neutralizing the toxin by a direct neutralization chemically of the toxin. Aside from the fact that Metchnikoff takes a directly contrary view, i.e., its action is that of a "stimuline" to phagocytosis; we have yet to discover a curative medicine that owes its value to its direct action on the blood or tissue rather than indirectly through the physiology of the organism. This is in other words its dynamic rather than its action. It is not the first time that a useful measure has an erroneous explanation. So prone is the tendency even yet to ignore the defensive powers of the body itself that any new curative agent is assumed to owe its value to some direct antiseptic or anti-toxin property. Think of the tragedies of the early experiences with tuberculin. The old conception of the direct action of tuberculin has been abandoned, says Theobald Smith writing in 1906. It is unfortunate for poor humanity that more tragedies founded upon the same fallacy of the direct action of the drug must result before the organic compound of the arsenic ceases to be used in such criminal dosage, as a direct poison to the syphilitic spirochætes.

Let us briefly refer to infinitesimal doses; no longer is it necessary to defend infinitesimal doses. The instances of the recognition of the utility of the small and even infinitesimal dose in orthodox journals are numerous, but the following from the official Journal of the A. M. A. may be taken as an example of minute or infinitesimals, but also a strangely familiar method of preparing these infinitesimals.

"Diluting the Tuberculin.—As a diluting fluid physiological salt solution is used to which 0.5 per cent. carbolic acid has been added to prevent decomposition. A pipette of small calibre, containing 1 c. c. accurately graduated to tenths of a c. c. is used.

This is sterilized and filled with one c. c. of pure bouillon filtrate, which is then emptied into a sterile bottle. Then using this same pipette or one exactly similar, 9 c. c. of the diluting fluid are added. This makes a ten per cent solution, each centimeter of which contains 100 mg. of tuberculin. Proceeding in like manner, we make from this 10 per cent solution a 1 per cent solution, each cubic centimeter of which contains 10 mg. of tuberculin, and in similar fashion we proceed to the weaker solutions. Eight solutions are used, each one tenth the stronger. No. 1 contains 1-10,000 mg. per c. c. and is for febrile cases only; No. 2 contains 1-1,000 mg. per c. c.; No. 3 contains 1-100 mg. per c. c.; No. 4 contains 1-10 mg. per c. c.; No. 5 contains 1 mg. per c. c.; No. 6 contains 10 mg. per c. c.; No. 7 contains 100 mg. per c. c.; No. 8 is pure tuberculin."

Here we see not only a recognition of the value of the infinitesimal (for 1-10,000 mg. is equivalent to 1-10,000,000 of a gram) but also an approximation of the method of homœopathy in preparing the infinitesimal. Note also the clumsy and confusing method of numbering these dilutions. The arbitrary and unnatural device of calling 1-10,000 mg. No. 1 will not deceive anybody and besides will prove very awkward now that the dilution above this, i. e., 1-100,000 mg. is being used and recommended by Trudeau in febrile cases. While of course 1x, 2x, 3x, etc. is thoroughly identified with the "antique nonsense" of homœopathy yet homœopathy has not a copyright and the scientific schools are perfectly safe in adopting this simple and natural method of indicating the strength of their infinitesimal doses. In fact all genuine homœopaths stand with outstretched arms ready to share with them. Hahnemann's heritage intended by him for his fellow sufferers of not only his time and our time but for all time.—*The North American Journal of Homœopathy*, October, 1911.

HEART REMEDIES.

BY GEORGE McGEORGE, M.D.

Camden, N. J.

By request of the chairman of the Bureau of Materia Medica I have prepared this paper. Several years ago in response to a similar request, I read before this Society in Newark, "Some Indications for a few Remedies in Heart Troubles." As that paper read before the New Jersey State Homœopathic Medical Society, was handed to the secretary, and is no doubt packed away among our archives I cannot say how many of the indications given then are incorporated in this paper. As homœopathy is an exact science, and as a good symptom or indication never loses its value, there will be no harm done if some of the statements are repeated in this.

If I remember aright, the chief criticism then was, that I had not mentioned digitalis, and as that remedy was the sheet anchor in Heart cases for those members who criticised, it was very plain that I had omitted the most valuable remedy in their armamentarium, and should be held to account for this shortcoming.

To avoid this criticism to-day, digitalis will occupy the first place. No doubt many of you know more about digitalis than I do, give a great deal more of it than I have given, probably have seen more marvellous cures follow its administration and, if you are honest, will admit that it has failed you sometimes in your hour of need.

Digitalis has its field of usefulness, and works splendidly and quickly when indicated. Had it not been for a few drops given to me one morning a few years ago, I would not be here now. Yet it is abused and given many times when it is not the indicated remedy. Like arsenicum, and nux, and strychnia, it is a good servant but a bad master. To be true to my profession and conscientious in administering this drug, against whose exhibition in my early practice I had been warned by many physicians of both schools, I have studied English, French, German and American authors of both schools.

so as to aid me in the proper and timely administration of this poisonous drug.

One of the best old school English writers—Sidney Ringer—gives this excellent advice: “I believe that we obtain better indications respecting the advisability of using digitalis by considering the totality of symptoms, rather than by confining the attention simply to the nature of the valvular affection, and therefore I will fully indicate the heart diseases in which this drug will prove useful and those in which it will be found of little or no use.” He recommends it in many forms of heart trouble, but advises caution in aortic cases.

Frederich, the German author, gives digitalis in large doses in pericarditis. Paul, the French savant, in this disease advises small doses. Babcock in his admirable work, writes: “The routine administration of digitalis is objectionable in any form of cardiac disease, and in pericarditis is especially so.” He advises against its use in acute endocarditis, because it increases the strength of the systole, and subjects the valves to greater strain. For the same reason it is contra-indicated in chronic pericarditis. My advice would be, not to use it in any form of endocarditis or myocarditis, because of the danger that follows its use. Steer clear of it in fatty heart, in dilatation of the heart, in tachycardia, in pericarditis and many of the functional disorders. In relative mitral insufficiency it is sometimes useful, and in hypertrophy of the heart, if other symptoms call for it, it may be permissible.

English doctors of the old school, as a rule, recommend its use in nearly every form of cardiac disease, many of them in exceptionally large doses, ranging from ten minims to half an ounce of the tincture. One English surgeon in cases of delirium tremens gives half an ounce of the tincture, and repeats the dose in four to six hours. Two of these cases died suddenly, but he naively remarks that people die from delirium tremens where they don't get any treatment.

Hahnemann in his *Chronic Diseases*, Vol. III, page 203, writing of digitalis, uses these words: “It is one of the most

powerful medicinal substances, and has been frequently abused by those allopathic physicians, who, not knowing when to employ the drug in suitable cases, aimed at astonishing the patient by sudden effects. The ignorance of physicians had led them to commit many murders with this drug.

The true homœopathist will never use it to the detriment of the patient, he will never give it to lessen, but to increase the number of pulsation." In a footnote on page 222 we read: "It is the most ordinary and certain characteristic property of digitalis to depress the pulse in its primary action; this depression is then permanently followed by a much smaller and more frequent pulse, which shows how great a mistake is committed by physicians of the allopathic school, who imagine they can permanently retard the pulse by digitalis."

In my practice, I find digitalis in the first or second decimal dilution as useful as the tincture, and many times when given in dilution will save the patient from the nausea, vomiting and anorexia frequently observed after full doses of the tincture. Occasionally my patients, who have been given big doses by other physicians, have been a little timid for fear my medicine would not be strong enough, but when relieved of their distress, admit that my dose was pleasantest. When I do use the tincture, I prefer the fat free preparation.

When you find an old man or woman troubled with vertigo, who has a weak heart with a slow pulse, digitalis is bound to help. If you must give the tincture, put a few drops in a tumbler one-third full of water and give a teaspoonful every five or ten minutes until relieved, then promptly stop your drug. The first or second dilution will work, if anything, a little more quickly. If you have chosen the right remedy a small quantity will do the work. If you have erred in your choice, a big dose will not correct your mistake.

When the patient feels as if dying, with faintness or sinking at the stomach, digitalis will promptly relieve. If the trouble is due to an overloaded stomach, or the ingestion of indigestible food, emesis will be a great help to your patient. In many

of these cases, *nux* follows nicely after the heart has been relieved by the *digitalis*. In this connection, the following clinical case will illustrate clearly this indication.

Was called hurriedly to see a man seventy-five years old who was suffering with his heart. Examination showed a rapid and irregular pulse, oppression of breathing, with great anxiety. He had eaten nothing that morning but he had eaten some cold beef before he went to bed, and his stomach felt uncomfortable. Five drops of *digitalis* tincture in two ounces of water, one half of which was given at once improved his heart's action, but his stomach troubled him. A swallow or two of hot coffee, acted promptly as an emetic, and after throwing up the coffee and some slime, he was immediately relieved; in two minutes he said he was all right, and sure enough his pulse had become normal, and there was no return of his trouble. On three separate occasions for the same condition, he received similar treatment with equally prompt results.

When a patient comes to see you, and has to rest before she can walk up the steps to your office; when she has to sit down and get her wind before she can tell you her trouble; when she is worse from ascending; when the trouble grows on her from month to month; when the pulse after walking ranges from 80 to 120, with slight rise in temperature; when she feels as if she would die, without the fear of *aconite* or anxious restlessness of *arsenicum*, a few drops of *digitalis*, first or second dilution, will give her prompt relief.

In cardiac cases when the skin is bluish, when the heart trouble is complicated with disease of the kidneys; in waterlogged cases, when the limbs, body, rectum, are full of water and the patient cannot lie down, *digitalis* will relieve, even if it will not cure the case. I prefer the fat-free *digitalis*. Professor Haines likes the powdered English leaves, given half a grain every twelve hours for two or three days, then wait for the cumulative effects. In my practice better results have followed small doses repeated frequently. But there are some cases

which digitalis will not relieve; I have seen excellent results many times follow the use of a nephritic pill, made of apiol, oil of juniper, asparagus seed, buchu, digitalis, podophyllum and potassium nitrate. In children six years old, youths of eighteen years, in young married woman, and in old men, equally good results have been observed and life has been prolonged from one to three years by their use. Sometimes good results in these water-logged cases have followed the use of a strong infusion of the ground root of apocynum cannabinum, but you must stop it the moment emesis sets in.

When digitalis fails to relieve these water-logged cases, Haines recommends squills. As the primary action of this drug is to increase the flow of urine, it will be all right for a few days, but as the secondary effects of squills is to cause scanty high colored urine then it must be discontinued. Hahnemann, in a foot note to his provings of this remedy, says that "thousands of years ago squilla maritima was used by the ancients to cure the dropsy, but that most of the patients found speedy graves on account of the secondary action of the drug." In diabetes mellitus and diabetes insipidus, it often proves helpful. But there is one good use of squills not generally known, but one which is worth remembering. When you have a salesman or saleswoman, or anyone who has to stand up all day, scilla maritima, high, will ease them, and cause them to bless you.

In cases of acute indigestion which so frequently precede heart trouble, digitalis disagrees with the gastric juice, and causes instant nausea; if in such cases we give our patient a swallow or two of coffee, or part of a glass of milk, the stomach will promptly reject both, and throw off not only the liquid and medicine just given, but will empty itself of the undigested food and slime, and the patient will get immediate relief from the cardiac distress and indigestion, and many times no further medical aid will be required. Finally, remember that digitalis given too often or too long, disagrees with the stomach, and causes nausea, vomiting, anorexia.

Having atoned for my sin of omission in the previous paper, by devoting so much space to digitalis this time, I will briefly allude to some useful heart remedies, and then close with some indications for our greatest heart remedy, aconite.

It is wrong to practice medicine by routine; it is worse to rely on three or four remedies when our materia medica is so rich in remedies affecting the heart. As hints in the selection of the remedy, I will suggest—when the trouble is from the sympathetic branch of the pneumogastric nerve, aconite stands out prominent. If from the spinal nerves, cactus will serve you better. If the heart is hypertrophied from a strain or from too heavy lifting, give arnica, and if you are persistent in its use, you will cure your patient. If the right heart is hypertrophied with irregular pulse, arsenicum will more surely cure the case. Arsenicum affects the right side of the heart, phosphorus the left side. Hering says that phosphorus has dilatation of the right ventricle, and hypertrophy of the left ventricle.

If the cardiac trouble results from over-eating or from indigestible food, nux or strychnine claims your attention. In valvular troubles when there is a bellows-like murmur, spigelia speaks first.

If the blowing is persistent, with difficult breathing, spongia should be considered. In many cases of mitral insufficiency with persistent regurgitation, spongia, if faithfully given, will remove much of the vegetative growth that has caused the leaky valve, and many times remove the whole valvular trouble.

In pericarditis, bryonia and kalmia will help you. When the stitching pains predominate, bryonia stands highest; when the pericarditis follows rheumatism, with numbness of the left arm, kalmia will be the remedy. It will reduce the heart's action and by lowering the pulsations will relieve the stitching pains.

In angina pectoris, magnesia phosphoricum 6x, has helped me most. If given in hot water, the relief comes quicker. When the angina is always aggravated by wind in stomach or abdomen, lycopodium 30 will do better. In cardiac asthma, lycopus and sumbul have been most useful. Lycopus is better

when the asthma is aggravated by flatulence, sumbul in elderly people where there is sclerosis of many of the arteries, indicating a calcareous degeneration of the aorta, or of the coronary artery. *Lachesis* is good in these cases, particularly if the patient is worse after sleep. When a patient tells you he must keep moving or his heart will stop beating and he will die, give *gelsemium*, but if he feels that his heart will stop, if he moves about, give *digitalis*, and in this class of cases *digitalis* high will be better than the crude drug. With these general indications for a few heart remedies, with your permission, I will ask your attention a little while, while I write about my favorite heart remedy.

Aconite is a glorious heart remedy. No other drug is so often called for in acute cases of cardiac trouble. No other remedy works so quickly, so quietly, so surely as *aconite* in heart affections. If this remedy was prescribed more frequently in endocarditis following rheumatism, or occurring during the acute inflammatory stage, there would be fewer valvular troubles to contend with after our patients get about. Yet there are many homœopathic physicians who rarely give it in this class of disease.

Fear is the predominating symptom calling for *aconite* in heart troubles. Fear of death, even predicting the time of her death. "Doctor, I shall die, I shall die today" has been said to me many times. And yet I give *aconite* without fear, knowing that it will increase the circulation and drive away the fear, and many times the patient has left my office, or my clinic, laughing at her own fear.

When a man comes with fear and trembling to my office, fearful that I will tell him he has some incurable trouble with his heart; when a woman comes to my clinic, nervous and afraid she will die before she reaches home, I do not make a through examination, but give them a dose of *aconite* 30, dry on the tongue, give them some more to take when they get home, tell them they will be better very soon, and the next time they come they will be stronger, and then I know they can tell me something good. I know the medicine will relieve, because it is homœopathic to

the case, and my confidence in the action of medicine gives confidence to them. If you have no confidence in your ability to help your patients, you can not expect them to have confidence in you. Aconite has cured these in the past, and aconite will continue to cure them till the end of time.

Palpitation of the heart with great anguish was one of Dr. Guernsey's key notes. If with this palpitation there is tingling in the left arm, we are sure aconite is the remedy. When the cause of the heart trouble can be traced to an exposure to dry, cold air, Guernsey says, aconite always cures them, and he is good enough authority for me.

In any cardiac lesion, when the patient complains of numbness in the left arm and tingling in the body, aconite should be thought of. If with these symptoms, there is fear of dying, or apprehensiveness, "we have the three legs for the stool to stand on," as Constantine Hering, used to say. It is said to be good in cases of uncomplicated hypertrophy, but in my experience arnica is the better remedy, and will complete the cure. In every case of hypertrophy I have examined, there has been soreness to a greater or less extent, but not otherwise. If the cause could be traced to a fright or mental strain, aconite might be considered; but in my judgment hypertrophy results from a physical and not a mental strain. Arnica and rhus would be the remedies to select from.

In all cases of valvular trouble, if in doubt at your first examination, give aconite, and the mental ease it will give the patient will win his confidence. In many of my cases, aconite cured up the whole train of symptoms. When it does not cure the organic trouble it quiets the nerves, calms the patient and gives you time to hunt the similimum. Losing their fear of death, they gain confidence in the physician and in this way aconite helps you in the cure of your patient.

Professor Haines teaches his students that aconite 2x, given early in acute endocarditis will cure the case and prevent valvular lesions. I have just verified this statement in a patient who is recovering from an attack of acute articular rheumatism with-

out an increase or aggravation of her old valvular trouble. In a previous attack four years ago, she nearly died from endocarditis that suddenly developed soon after my daily visit, and from failure of her nurse to report at once, suffered nearly twenty-four hours before I saw her again. She eventually got up, but made a slow recovery. This time aconite has always been in the house to give her when the pain involved the heart, and she convalesces without any new valvular lesion, in fact the insufficiency is less than it was before this new invasion of rheumatism.

In acute pericarditis with extreme pain and fear, aconite will quickly quiet the heart and relieve the pain. In this disease, as in all other cardiac troubles, the remedy should be administered without unnecessary delay. I frequently give it every fifteen minutes until the patient sweats, and I rarely have to give it more than an hour to accomplish this end.

There is one special form of cardiac disease that I consider aconite a specific remedy for, and that is the essential paroxysmal tachycardia. Babcock gives a nice description of it, but admits he has never been fortunate enough to see a patient in a paroxysm. I have seen four patients during the paroxysms, seeing two cases within twenty-four hours. These attacks came on suddenly, sometimes without any warning and like other spasmodic troubles, sometimes recover without treatment, but frequently have a return. In my cases, where aconite was administered during the paroxysm there has been no return. Let me recite some of these cases.

Case 1. A musician, who had been rehearsing in an orchestra dropped his music sheet off the stand and in stopping to pick up the sheet, was suddenly taken. He waited five minutes, and getting no relief, came to my office. He was nervous and frightened, his pulse ran up to two hundred beats in a minute, the fastest pulse I ever counted. I gave him aconite 30, one dose, told him to sit down and take a long breath, and while writing down his symptoms, the paroxysm suddenly subsided. "There it is gone," he said, and was apparently as well as ever. This was on Sept. 18, 1908, and although I have seen him since then, he has had no more attacks. This patient was forty-three years old, and had been under my care, at times, for cardiac trouble for a few years, but heretofore cactus was the remedy that did the most good, except one time two years previously, my records show he received aconite 30, because he complained of so much tingling in his limbs.

The suggestion to take a long breath, was for the purpose of taking his mind from his heart, and concentrate it on his lungs. The aconite was given because of the fear he expressed in his

face. Babcock suggests ten minims of digitalis every hour for six hours, and then if not relieved, try something else. As possible exciting causes he names "a blow on the chest, fright or other strong emotion, and a sudden physical effort." In this case the patient told me the players were crowded together, and when he stopped to pick up his music sheet he had to squeeze in between two music-stands.

Case 11. On Sept. 19, 1903, in the evening I was called to see Mrs. N.—who was troubled with her heart. On examination I found her nervous and with pulse running up to 180. She had had the attack over an hour when I first saw her. She had ridden ten miles in an open wagon with her husband, from the shore to Egg Harbour, then fifty miles in steam cars, arriving home quite late. She had eaten heartily of some cold roast beef and later some pineapple, and in addition to the tachycardia she felt uncomfortable in her stomach. Aconite 30, took away the nervousness, lowered the pulse some, but the relief was only partial. As she complained of more distress in the stomach, but could not vomit, I gave her ipecac 30, and as soon as her stomach was relieved she got some more aconite, and improved in a few minutes, but it was a full half hour before the paroxysm subsided, and the pulse became normal. Further questioning brought out the fact that she was subject to these spells, and sometimes they went off without any medicine; this time it did not, and she was afraid she was going to die, when they sent for me. Aconite relieved her, but I could not get the confidence of my patient, she would not take a deep breath, and when her pulse became normal, she was so weak she had to lie down. I think the indigestion complicated this case.

Case 111. A young girl, sixteen years old, was brought to my clinic a few months ago. She was so frightened she could scarcely speak, her pulse was 180 and steady, and she was afraid she was dying. I had her sit down, gave her some aconite and began speaking to the lady who came with her. I told the girl to take a long breath, but she was too frightened. I spoke something to her, told her she would soon be better, gave her another dose, then she took the long breath, jumped up and said the pain was gone. I kept her under observation ten minutes longer but there was no return of the paroxysm and I dismissed her. I have seen her several times since, but she had no more paroxysms of tachycardia. She had no organic trouble.

Case IV. This was an anomalous yet and interesting one. The patient, a lady seventy-three years old, had been an invalid for thirty-six years. She first had acute rheumatism of the joints, then endocarditis resulting in mitral insufficiency. Later she had rheumatoid arthritis, and last of all, arthritis deformans.

With all these sufferings she was an uncomplaining Christian woman. I had attended her occasionally for three years. On April 29, 1910, I found her suffering with tachycardia, the pulse ranging from 170-175, with some difficulty in breathing. She was nervous from the palpitation, as she called it, but while her heart went so fast, she was entirely free from pain in all joints, and could move her fingers so much better than usual. Aconite 30, in water, a teaspoonful every five minutes, relieved her in twenty minutes; in forty minutes the pulse had become normal, and the pain in her joints all returned. In an hour she was as well as usual.

On May 1, early in the morning, she had a cerebral hemorrhage, and lost the use of her left side. Nux 30, overcame this for a time, but in ten days she had a severe attack, and never regained the use of her left side. A month later, she was removed to the West Jersey Hospital where she remained till her death on March 14, 1911. Three times in the hospital she had paroxysm of the tachycardia, which aconite 30, always controlled, sometimes in ten minutes, once in half-an-hour. Whenever she had a paroxysm, she was free from pain, and she regained some control of her paralyzed side. When the tachycardia left her, the pain returned. At the last, she died from catarrhal pneumonia.

In closing, let me remind you, that no matter what name you give to the pathological condition, as true homœopaths prescribe for the patient, and for the disease.—*The North American Journal of Homœopathy*, December, 1911.

REVIEW.

Leaders in Respiratory Organs. By E. B. Nash, M.D., Author of "Leaders in Homœopathic Therapeutics," "Leaders in Typhoid," "Leaders in Sulphur," and "How to take the cases." 118 pages, cloth \$1.50. Postage, 8 cents, Philadelphia. Boericke and Tafel.

The name of Dr. Nash is a guarantee for the superiority of the work. In the preface he says that "the object of this unpretentious work is to place before the busy practitioner the indications, especially the *leading* ones, in a different way from that usually found in the ordinary text book." The book is well arranged and treats all the diseases of the respiratory organs from simple catarrh and cough to tubercular phthisis. The man who uses this book must have some previous knowledge of the etiology and pathology of the diseases and must be a good diagnostician, otherwise he will stumble between pleuritis and pneumonia, between phthisis and chronic cough, between croup and diphtheria. It is, therefore, that a man who practises homœopathy, must have a thorough knowledge of anatomy, histology, physiology and pathology. In our country, homœopathy is being practised mostly by the laity whose knowledge is very rudimentary. And, however they may be successful in their treatment, in graver cases they always make a mess and thus bring odium from the orthodox school. Dr. Nash's book is an excellent one and every physician should not fail to have a copy of it by his side.

The Morphia Habit and its Voluntary Renunciation. By Oscar Jennings, M.D., (Paris) Demy 8 vo. pages XX + 492. Price 7/6 nett. Baillière Tindall and Cox, London.

This is an excellent treatise on morphia habit and its voluntary renunciation. In our country, there is properly speaking no morphia habit, but opium habit we have in large numbers. As opium contains morphia, one may say this habit is morphia habit too. The author in his preface says "It has been decided by the profession at large that morphine *habitués* are invariably cheats and liars, degraded beings unworthy of confidence, that it is a waste of time to study the subject, or to try to help those who do not intend to help themselves; that the best attitude towards such patients is to have nothing to do with them." The author refutes this idea of the profession and thus writes, "This attitude is most deplorable. As a matter of fact, all morphine habitues are not willing slaves so generally supposed. Very often the victims of medical

carelessness or ignorance, it is nearly always the want of suitable guidance, and the discouragement consequent on ill success, that keep them in bondage." This is very true. It is through the fault of medical men or men who think themselves as all-knowing after perhaps from a cure by morphia, that people acquire this habit. That this habit can be removed by medicine and by culture of self reliance is very well shown in this book. The medicinal treatment, such as by hyoscine, atropine, duboisine may produce rapid cure, but such treatments require restraint, "and experience shows," says the author, "that the results so obtained, are rarely definite." The re-education of self control is the chief thing that is necessary for the radical and moral cure of such a habit. The author has very carefully treated his subject and it will repay doubly the time and attention paid to its perusal.

Aids to Microscopic Diagnosis (Bacterial and Parasitic Diseases) by Ernest Blake Knox, B.A., M.D. (Dublin) size Fscp. 8 vo. pages VII, + 156, price 2/6 nett. Bailliere Tindall and Cox, London.

These aids are very useful to the students going up for any examination, when they have hardly any time to revise the voluminous works on every subject.

Dr. Knox's arrangement is such that he has not left any thing which is important. He begins with the blood and ends with vomit, fæces, urine &c. Every subject have been duly dealt with. The methods of microscopic examination and of culture have been fully discussed.

The last chapter dealing with staining processes and reagents, agglutination, reactions &c., is exceedingly useful. In fact the student going up for any higher medical examination will derive material help from this little book.

Pocket-book of Veterinary Practice. By A Von Rosenberg, D.V.S. 126 pages. Cloth 75 cents postage 4 cent. Philadelphia. Bœricke and Tafel.

This is a handy book on Veterinary Practice and is a very useful one. The Homœopathic treatment of lower animals are now-a-days becoming more and more popular. It would not have been so if the results had been otherwise. We hope this little book will be very popular and every one who has got a horse or a dog or any other lower animal should possess a copy of it which will prove useful in hours of need.

EDITOR'S NOTES.

The Seasoned Tobacco Pipe.

The wife (depicted, we think, some years ago by *Punch*) who thought to delight her husband by throwing away all his dirty old tobacco-pipes and replacing them by a clean new one was, it is highly probable, doing him after all a good turn. Most smokers of the pipe admit that a pipe is not agreeable to smoke, until it has been well seasoned by several "smoke," and hence the well-burnt, dark-coloured, oil-laden pipe is, as a rule, a highly cherished accessory to the tobacco habit. It would appear to be clearly demonstrated, however, in an interesting article by Dr. J.D. Reckitt contributed to our columns this week, that the seasoned pipe may be poisonously saturated with oils, be these nicotine, pyridin, or other toxic substances which the chemist has detected from time to time in the condensed products of tobacco smoke. Dr. Reckitt was puzzled for some time about the cause of the breathlessness of a patient, the symptom having been suffered for some considerable time. The condition was aggravated on going upstairs or on hurried walking. The patient could not draw a complete or comfortable breath, and in spite of a robust and healthy appearance the dyspnoea persisted and caused some anxiety. At length an old "friend" was suspected as the cause of the trouble in the shape of a very dark-coloured briar which he had smoked on and off ten years, while the tobacco he affected was described as a powerful brand. The suspicion seemed well founded, for on discarding the highly seasoned pipe an improvement in the condition of the patient soon set in. He expressed himself much better, there was little or no breathlessness even when going upstairs, and he himself was convinced that the trouble had been caused by smoking a foul pipe. Finally, within a few months of abandoning the foul pipe he reported himself as practically quite well and enjoying life, freed as he was from the distressing dyspnoea from which he had suffered for so many years. Though he felt bound to give up his pipe he consoled his tobacco hunger with a dozen Turkish cigarettes daily, which did not appear to do him any harm. The case is of interest, inasmuch as the seasoned pipe is preferred by most smokers because it gives a cool, unirritating, good-flavoured smoke, and yet in spite of these qualities the probability is that such smoke is stored with a larger amount of toxic substance. It is well known, of course, that tobacco juice expressed or distilled by heat developed in the usual method of smoking is very poisonous. There is the example of a drunken student who was given a dram to drink into which his fellows had poured the juice from their pipes. The result was fatal. Then, again, children have been poisoned after using an old tobacco pipe for blowing soap bubbles. In all cases one of the prominent symptoms is difficult breathing.—*The Lancet*, June 3, 1911.

Walking.

A patient being asked whether Dr. Jephson, whose statue now adorns the Spa Gardens at Leamington, did not make walking a very prominent feature in his system, gave the following answer :

He does, Sir ; so much so, that some have a notion
The secret is his of perpetual motion ;
For all the disciples who Jephson obey
Walk out in all seasons, all hours of the day.
They walk when the north wind blows piercing and bleak,
They walk when their mouths are so stiff they can't speak ;
They walk in the mists and cold fogs of November,
They walk in the drizzle and damp of December ;
They walk when it thaws, they walk when it freezes,
They walk for all causes, to cure all diseases ;
They walk when they have not a limb that is sound,
They walk when they cannot put foot to the ground ;
They walk tho' each limb in their bodies may ache,
They walk tho' their poor backs are ready to break ;
They walk when they're fasting, they walk when they're eating,
They walk when so weary they'd rather be beaten ;
They walk after fainting, hysterics, and fits,
They walk in their senses and out of their wits ;
They walk if they're Commoners, they walk if they're Peers,
They walk whether middle-aged, young or in years ;
Epileptic, dyspeptic, neuralgic, what not,
No matter what ails them, they set off and trot.
The plethoric walk in the hope to get pale,
The palid ones walk in the hope to grow hale ;
The stout and unwieldy they're walking for that,
The bony and skinny they walk to get fat.
If some walk too slowly they're joined by the Master,
Then surprising to see they walk fast and faster.
At other times body or mind make resistance,
But with him they can walk any pace, any distance.
'Tis rumoured Jephsonian-trained infants are able
To walk the first month, but that must be a fable ;
However, we may soon see, perhaps without wonder,
Small babies all walking at six months and under,
Lilliputian pedestrians standing quite strong,
Tiny peripatetics, not yet two feet long.

For who knows what wonder may meet our inspection,
 When walking, like steam, shall be brought to perfection.
 Which it must be in Leamington, where without strife,
 Walking forms the chief end, the main business of life.

These verses were found among Mr. Jhon Fowke's medical papers, which were sent to Professor Saundby by his executors. There is no clue as to the author.—*The British Medical Journal*, August 26, 1911.

The death of Charles II.

The following extracts from Burnett's *History of His Own Time* seem worthy of note. In his gossipy way, he gives a fairly good layman's account of what happened, and seems himself to lean towards the theory of poisoning. What an interesting side-light in history is his record of "some parts of his inwards and some pieces of fat" being thrown away in the water and caught on a scullery grating! It reminds one of Imperial Caesar, dead and turned to clay.

"All this winter the King looked better than he had done for many years. He had a humour in his leg, which looked like the beginning of the gout; so that for some weeks he could not walk. . . . On the first of *February*, being a *Sunday*, he eat little all day, and came to Lady *Portsmouth's* at night, and called for a porriuger of spoon meat. It was made too strong for his stomach; so he eat little of it; and he had an unquiet night. In the morning one Dr. *King*, a physician, and a chymist, came as he had been ordered, to wait on him. All the King's discourse to him was so broken, that he could not understand what he meant. . . . He was scarce come in, when the King, who seemed all the while to be in great confusion, fell down all of a sudden in a fit like an apoplexy; he looked black, and his eyes turned in his head. The physician, who had been formerly an eminent surgeon, said, it was impossible to save the King's life, if one minute was lost; he would rather venture on the rigour of the law, than leave the King to perish. And so he let him blood. This *King* came out of that fit; and the physicians approved of what Dr. King had done; upon which the Privy Council ordered him a thousand pounds, which yet was never paid him. Tho' the king came out of that fit, yet the effects of it hung still about him, so that he was much oppressed. . . . On *Thursday* a second fit returned." Hudleston was then sent for by the Duke of York, the King's brother. The former was "in great confusion, for

he had no hostic about him. But he went to another Priest, that lived in the Court, who gave him the pix with an hostic in it. . . . The Hostic stuck in his throat : and that was the occasion of calling for a glass of water. . . . The King suffered much inwardly, and said, he was burnt up within ; of which he complained often, but with great decency. . . . He continued in the agony till *Friday*, at eleven o'clock, being the sixth of *February* 1684. . . . There were very many suspicions of his being poisoned : for, tho' the first access looked like an apoplexy, yet it was plain in the progress of it, that it was no apoplexy. When his body was opened, the physicians who viewed it were, as it were, led by those who might suspect the truth, to look upon the parts that were certainly sound. But both *Lower* and *Needham*, two famous physicians, told me, they plainly discerned two or three blue spots on the outside of the stomach. *Needham* called twice to have it opened ; but the surgeons seemed not to hear him. And when he moved it the second time, he, as he told me, heard *Lower* say to one that stood next to him, *Needham* will undo us, calling thus to have the stomach opened, for he may see they will not do it. They were diverted to look to somewhat else : and when they returned to look upon the stomach, it was carried away ; so that it was never viewed. *Le Fevre*, a *French* physician, told me, he saw a blackness in the shoulder : upon which he made an incision, and saw it was all mortified. *Short*, another physician, who was a Papist, but after a form of his own, did very much suspect foul dealing : and he had talked more freely of it than any of the Protestants durst do at that time. But he was, not long after, taken suddenly ill, upon a large draught of worm-wood-wine which he had drunk in the house of a Popish patient . . . of which he died. And, as he said to *Lower*, *Millington*, and some other physicians, he believed that he himself was poisoned for his having spoken so freely of the King's death. The King's body was indecently neglected. Some parts of his inwards, and some pieces of the fat, were left in the water in which they were washed : all which were so carelessly looked after, that the water being poured out at a scullery hole that went to a drain, in the mouth of which a grate lay, these were seen lying on the grate many days after. His funeral was very mean. . . . So many of the small veins of the brain were burst, that the brain was in great disorder, and no judgment could be made concerning it. To this I shall add a very surprising story, that I had in *November* 1709 from *Mr. Henley* of *Hampshire*. He told me, that, when the Duchess of

Portsmouth came over to England in the year 1699, he heard, that she had talked as if King *Charles* had been poisoned ; which he desiring to have from her own mouth she gave this account of it . . . He (i.e., the King) was come to a final resolution of sending away his brother, and calling a Parliament ; which was to be executed the next day after he fell into that fit of which he died. She was put upon the secret, and spoke of it to no person alive, but to her confessor : but the confessor, she believed, told it to some, who seeing what was to follow, took that wicked course to prevent it.—*The British Medical Journal*, August 26, 1911.

Double Testicle on one side.

We have recently received a report of a remarkable instance of this condition detected in the course of an operation. Dr. Caroline V. Lowe of the Redfern Memorial Hospital, Hassan, Mysore Province, undertook Bassini's operation for left inguino-scrotal hernia in a Hindu boy, aged 3 years. It appeared to be congenital, but the parents were very ignorant, so that no reliable history was obtainable. When the structures in the canal were being isolated from the sac two cords were discovered, and they were traced to two testicles lying in the scrotum. They were each of the size of a normal single testicle. After the sac was cut away and ligatured at the internal ring, the two testicles were returned to the scrotum. After this reduction the scrotum appeared highly unsymmetrical, the left side being very full and the right quite empty. Some oedema of the parts followed the operation, but soon subsided. The two testicles now form an easily definable mass on the left side, which cannot be separated.—*The British Medical Journal*, September 2, 1911.

The Search for Albumen in Sputum.

Roger (*Rif Med.*, May 29th, 1911) draws attention to the diagnostic importance of looking for albumen in the expectoration. The number of examinations is 1,710, some in tuberculous and some in non-tuberculous cases. With very few exceptions, albumen is constantly found in tuberculous cases, and its presence may be taken as an index of the activity of the disease ; when this is quiescent the albumen disappears. Acute miliary tuberculosis seems to be an exception to the general rule that the more active the disease the greater the albumen, as it may fail entirely in these cases. With regard to non-tuberculous cases, albumen was found in the sputum

in 72 (pneumonia, bronchopneumonia, etc.). In these cases the albumen was usually present abundantly, but completely disappeared with this disappearance of the acute disease. In 142 cases of simple bronchitis the test for albumen was negative; this is of much importance, as it helps to distinguish a simple from a tuberculous bronchitis. Albumen may be found in the sputum of cardiopaths or albuminurics. Certain fallacies should be avoided. The sputum should be fresh, contain no blood, and as far as possible no pharyngeal secretion; it should be collected in a dry recipient, mixed with saline solution, and well stirred. A few drops of acetic acid are added to coagulate the mucus, and then filtered. The albumen is tested for in the filtrate by boiling, a little saline solution being first added.—*The British Medical Journal*, September 2, 1911.

The etiology of scurvy.

The causation of scurvy is admittedly still obscure, and the recent experience of Arctic travellers has discredited old theories, without supplying any sufficient data for justifying new ones. Therefore a study of the outbreaks of scurvy which seem to occur amongst native workmen employed in the mines in Rhodesia is welcome. A paper has been sent to us (reprinted from the *Transvaal Medical Journal*, April and May, 1911) by Dr. W. Morton Hewetson, Medical Officer to the Wankie Colliery Company, South Rhodesia, in which he points out that the incidence of scurvy follows the temperature, rising and falling with it, and that it is not dependent upon any variations in diet, nor can the attacks be cured or prevented by the addition of fresh meat or fresh vegetables or lime juice to the diet. On the other hand, he believes that the earliest symptom is spongy gums. He is sceptical of the truth of what has been said about the fine teeth of the African native, and says that the mouths of native Africans are often extremely foul, the teeth being carious and covered with tartar. He believes that scurvy is a disease originating in the gums, and due to micro-organisms, which find a nidus there, and he points to the success of early examination of the gums, combined with vigorous local treatment by brushing and mouthwashes. He thinks the causal organism in south Africa is a spirochaete, which is constantly to be found, and which he thinks is closely allied to or identical with the *Spirochaete refringens*. The suggestion is one which is plausible at least in respect of some cases of scurvy, and it will, we hope, be followed up.—*The British Medical Journal*, September 2, 1911.

Coffee.

Chavanne in the *Journ. of the Med. Society of New Jersey* discusses the value of coffee to the physician, although he says that it is not used in medicine except as an auxiliary and then indifferently. He does not discuss the drug coffee. He says that various authors do this, and teach that its value depends upon the alkaloid caffein, as other drugs of the group,—tea, cocoa, guarana. The essayist believes this is very much the same as saying that a man walks because he has legs. Attention is however called to the fact that black coffee will produce physiological effects such as lying awake and staring at the ceiling impressed with the clearness of the different sounds characteristic of the night. In time they fade into busy sleep as though wakefully engaged mentally, and with no idea of time the patient will awake at the accustomed hour. But the value of coffee as a promoter of the social element must not be overlooked. It has ever been an aid to liberty and freedom of speech, for where coffee was served there the feast of reason began and naturally discussion and interchange of theory and thought followed. Long before chemists had isolated the active principle of the bean, the subtle principles embodied in the fragrant berry of Araby had won first place in the social and domestic economy of the world. In London coffee houses were social centres, where politics were discussed as well, and no doubt in them many historic events had their inception. The value of coffee to the doctor is evident. While it is not claimed to possess nutritive properties, it exhilarates, arouses the nervous centres to activity, counteracts the stupor occasioned by fatigue, allays hunger to a certain extent, gives to the weary increased vigor and imparts a feeling of comfort and repose. Coffee acts where digitalis ceases. If the heart muscle is not competent to propel the blood, digitalis cannot strengthen it. Coffee acts by stimulating the nervous centres which are the heart's power. It stimulates brain activity because under its influence the amount of blood circulating in the brain is lessened but is served with more force thereby relieving the vascular system. This explains its action in opium poisoning and in cerebral congestions. It stays heterogeneous change by slowing the waste of tissue. The supply of blood to the tissues is less in quantity, but is more forceful and rapid, hence the assimilation of nutritive matter is increased, as indicated by the decrease of solids in the urine. Following the primary transient stimulating impression, the pulse is diminishing in force, frequency and volume. The biliousness which sometimes affects habitual

coffee drinkers is due to its specific arterial activity, which distends the venous side of the circulation and consequently engorges the portal circulation.—The *North American Journal of Homœopathy*, September, 1911.

Site of Action of Strychnine.

Ryan and McGuigan (*Journ. of Pharm. and Exper. Therap.*, March, 1911), working in the laboratory of physiology and pharmacology of Washington University, investigated the site of action of strychnine in the spinal cord. With regard to the sensory cells, the distribution of their fibres to various levels of the cord renders it possible to study the action of strychnine by its application to a localized region of the cord, but in order to make the experimental conditions more favourable the method of transfusion was used, thus giving the animal under observation two separate systems of circulation, into one of which the drug could be injected, thereby poisoning one part while the other remained unpoisoned. By connecting the central ends of the carotid arteries and external jugular vein of the donor to the peripheral ends of the thoracic aorta and inferior vena cava of the recipient, everything below the point of anastomosis in the latter was supplied by blood from the former, while everything above this point was supplied by the recipient's own blood, and a drug could be injected so that either half of the animal could be poisoned without affecting the other half. When the lower half of the spinal cord was slowly poisoned with strychnine by the above method symptoms of poisoning developed in the following order: (1) Exaggerated reflexes below the anastomosis; (2) spasms upon stimulation of the skin below the anastomosis; (3) spontaneous tetanus in hind part; (4) spasms of entire animal upon cutaneous stimulation of the lower half, while similar cutaneous stimulation in the upper half only produced normal reflexes; (5) general spontaneous tetanus. In more gradual poisoning by direct application of strychnine to the spinal cord in different regions the symptoms were slower in development, commencing with exaggerated reflexes and ending with spontaneous spasms, at first localized to the poisoned region, and later appearing in unpoisoned regions. With regard to the action of strychnine on the motor cells, the minimal electrical stimulus required to elicit a response in the fore and hind limbs when applied to corresponding cortical areas was first established, and then the spinal cord in the region of those limbs was poisoned, and the difference in response to the cortical stimulation noted. Poisoning

of either the lumbar or cervical region of the cord was followed by increased excitability of the poisoned area when the corresponding cortical area was stimulated, and a similar result was obtained if the posterior roots in the poisoned area were served. By so thoroughly poisoning the cervical region of the cord that cutaneous stimulation causes general spasm and then severing all the posterior roots, stimulation of the foreleg cortical area will cause spasm of the forelegs only, the stimulus required to bring about such result being weaker than that required in the beginning to cause a mere twitch. As the result of these investigations, the authors are of opinion that irritability of the motor-cells is increased by strychnine, though there are still some hypothetical objections which must be met experimentally before a definite conclusion can be drawn.—The *British Medical Journal*, September 2, 1911.

Diet and Character.

In a recently-published translation of a work by Friedrich Nietzsche curiously entitled *La Gaya Scienza*, occurs the following suggestive passage: "When a profound dislike of existence gets the upper hand, the after-effect of a great error in diet of which a people had been long guilty comes to light. The spread of Buddhism (not its origin) is thus to a considerable extent dependent on the excessive and almost exclusive rice fare of the Indians, and on the universal enervation that results therefrom. . . . The immense prevalence of rice-eating impels to the use of opium and narcotics, in like manner as the immense prevalence of potato-eating impels to the use of brandy. It also impels, however, in its more subtle after-effects to modes of thought and feeling which operate narcotically." There is here indicated a field of research which dietetic reformers might well explore, if only by way of varying the monotony of incessant reiteration of the superiority in "food value" of lentils and haricot beans over beefsteaks and mutton chops. A comparison of the moral characteristics (if the term be applicable in such connexion) of carnivorous and herbaceous or graminivorous animals does not take us very far. If the elephant can compare in intelligence or the horse in beauty and spirit with any beast of prey—points which many, however, will dispute—the supremacy of the lion or tiger in grace and activity, which, in comparison with the elephant at least, is undeniable, cannot be attributed solely to the effects of a flesh diet, since it may well be in great measure due to the

demands of the hunting instinct. A thorough analysis and comparison of the physical, mental, and moral attributes of human races differentiated in respect of diet could hardly fail to yield valuable results. The same process might then be extended to individuals and to the same individual under different dietetic regimens. It is told of Herbert Spencer that he adopted vegetarianism by way of experiment, and that after twelve months he was so struck by the deterioration of his literary output during the period that he destroyed the whole of it and reverted to his previous habit. This anecdote, of course, does not prove anything more than that the philosopher himself needed or believed that, for full mental efficiency, he needed a mixed diet. In no department, probably, has the saying that "one man's meat is another man's poison" greater applicability than in that of its literal significance. There are children who show an instructive repugnance for animal foods and seem to thrive best without them—"physiological vegetarians" such individuals might be called. Other children (particularly, perhaps, those of a "strumous" tendency) prefer meat and savouries to the lighter foods which the modern parent commonly provides. It may or may not be true that avoidance of animal foods affects the disposition and tends towards the elimination of the combative instinct; facts are wanting to decide a question so complex. But with regard to the point raised by Nietzsche as to the effects of a starchy diet upon racial physique and its issue in the craving for narcotics, this at least may be said: Meat is not merely a food, but also a powerful stimulant—witness the effects of beef-tea—and there is no doubt that the use of one form of stimulant tends to evoke the craving for others. Vegetarians who have, before adopting that regimen, been moderate drinkers and smokers, often lose, wholly or in part, the taste for alcoholic beverages or tobacco. If, therefore, the craving for narcotics attributed to rice-eating races have a dietetic origin, it is presumably due rather to the deficiency of the nitrogenous factor than to the vegetable origin of their food. The great need in regard to all these dietetic problems in the avoidance of dogma and of hasty generalization, and the application of the experimental and inductive method to the elucidation of the various issues involved. Only thus can we hope to arrive at the desirable consummation of being able to indicate in the case of any given constitution, temperament, and mode of life the precise dietary calculated to give the best results in the shape of health, happiness, and efficiency.—*The British Medical Journal*, September 16, 1911.

The Inspiration of Genius.

Under the title of "Discharging Neuroses"—*Neuroses a décharge*, a term suggested by Fere—M. Giraud has recently presented a thesis for the doctor's degree to the University of Lyons in which he endeavours to show that convulsive states are only an exaggeration of ordinary nervous activity. What is pathological in them is only the intensity of the action. The "discharge" must be looked upon as a special mode of nervous activity, which occurs in persons in whom an inhibitory cortical check is wanting. The discharge, however, takes other forms besides convulsive manifestations, one of the most striking being what is called "inspiration" in men of genius. M. Giraud's thesis is largely based on documents of an autobiographical character left by great men, reinforced by the testimony of contemporaries. Several of them describe inspiration as a sudden and involuntary state essential to the production of the work of genius. So necessary is it felt to be that they attempt to induce it by various methods of stimulation. Claude Bernard says: "You feel a slight shock of electricity which strikes your head and at the same time seizes the heart. That is the moment of genius. . . . Then all at once comes a flash of light. The new idea appears with the rapidity of lightning as a sort of sudden revelation." Is not this, says M. Giraud, the nervous discharge above spoken of, operating in a brain of the highest type instead of in that of a chronic neuropath? The men of genius as to whom M. Giraud has been able to get particulars, who tried to induce this in themselves, seem all to have aimed, though in different ways, at the production of cerebral congestion, a state favourable to the nervous discharge which they seek to bring about. Tronchin asked Gretzky how he composed his music. The answer was, "Just as one makes verses or paints a picture. I read and read again twenty times the words which I wish to express by sounds. I require several days to heat my head, then I lose my appetite, my eyes become inflamed, and the imagination is excited. Then I compose an opera in three weeks." He had consulted Tronchin for nervous troubles, and the physician said to him that if he continued to work in that way he would never get well. To produce hypertension and to bring about the psychical discharge which is the mechanism of inspiration, Edgar Allen Poe drank brandy, while Verlaine found his Pierian spring in absinthe, Hoffmann in wine, Voltaire in coffee, Baudelaire in hashish, and De Quincey in opium. Alfred de Musset took a mixture of beer and absinthe and smoked

many cigars. The result is said to have been a special kind of drunkenness, under the influence of which he passed into a kind of cataleptic trance. "Then," says d'Orceet, "he made his choice among the strange images floating within his reach, like a fisherman who casts his line into water full of fish." This recalls Guy de Maupassant when he had finally crossed the borderland, chasing his "ideas," which he described as appearing in the form of butterflies and glow-worms! D'Orceet says that in proportion as his materials reached him, Alfred de Musset arranged them in his work with as much coolness and facility as a mason on his scaffolding. Artificially but violently concentrated, his imagination gave them, when they were in place, the last touch of the chisel, and such was the clearness of his memory that the next day, when the fumes of the poison were dissipated, he preserved no other recollection than that of the verses composed the day before, which he wrote out without alteration. To this list we can add a few others. Balzac, who worked at night, drank coffee in large quantities. To Burns the whisky bottle was too clearly a fount of Hippocrene. Byron said he found Epsom salts more stimulating to him than champagne, but he also roused his flagging Muse with ardent spirits. Poets and artists are not as a rule abstainers, but the highest work has not been produced by drunkards. Perhaps the oddest source of inspiration was that used by Dryden, who before writing poetry had himself bled and took a purge. Other methods of setting the machinery of inspiration at work consist in position and surroundings. Schiller plunged his feet into ice, and as Goethe tells us, in a room pervaded by the smell of rotten apples. Milton buried his head in cushions or blankets. Descartes and Leibnitz did their thinking in bed. Victor Hugo wrote standing at his desk. Rousseau meditated with the sun beating on his head. Gluck composed in the open air, and sometimes he would have his piano taken into a field exposed to the full glare of the sun. Herbert Spencer screwed his brain up to concert pitch by rowing or playing with a ball for a quarter of an hour; then he dictated for a time, and then applied the stimulus of muscular exercise as before. It must have been trying work for his secretary.—The *British Medical Journal*, September 16, 1911.

Gleanings from Contemporary Literature.

IBERIS AMARA AND CRATÆGUS OXYACANTHA :
THEIR DIFFERENTIAL USES IN
CARDIAC DISEASES.BY JOHN MURRAY MOORE, M.D. Edin., M.R.C.S. Eng.,
F.R.G.S., &c.

Both these heart medicines, homely as are their origins—the one from the pretty ‘white-blossomed candy-tuft of our gardens, and the other from the still more familiar hawthorn of our hedges—fill places of their own in our *Materia Medica*, and are, as I shall show, potent in controlling certain disorders of the heart and arteries, when chosen according to the Law of Similars, or even on the ground of “*ex usu in morbis*.”

(A) *IBERIS AMARA.*

Iberis Amara, called in common parlance the bitter candy-tuft, is a herbaceous annual plant, usually growing on chalky soils, and cultivated in gardens for its pretty white flowers, which grow in clusters. It belongs to the Natural Order Cruciferae, an order which, besides the two mustards (*Sinapis alba* and *nigra*), yields to our *Materia Medica* cheiranthus, cochlearia, nasturtium, raphanus, and thlaspi bursa pastoris. A tincture is made from the crushed seeds.

In 1847, by a paper read to the Provincial Medical and Surgical Association, Dr. Sylvester first called attention to the medicinal powers of *iberis*. Using the seeds, triturated with cream of tartar to conceal their bitter taste, Dr. Sylvester described his uniform success in the treatment of cases of asthma, bronchitis, dropsy, and more especially cardiac hypertrophy. His ten years’ experience had convinced him that this drug had a specific action on the heart, as sedative, but not displaying the retarding influence characteristic of digitalis. Occasionally giddiness, vomiting, or diarrhoea were caused in sensitive patients; but these inconvenient symptoms were transient.

Dr. Edwin M. Hale, our great prover, saw in *iberis* a fruitful field of drug action, and instituted the provings which Allen has recorded in his fifth volume.

From three provers, two men and one woman, were elicited 150 distinct symptoms, of which twenty-one related to the heart and arterial circulation.

The leading symptoms may be thus summarized :—

General.—Loss of strength; trembling sensation throughout the whole body, especially the legs; is weak, nervous, and exhausted on rising, with nausea and dizziness; . . . Sleeplessness; . . . (restless night), with horrid dreams, &c.

Head.—Vertigo (in all three provers), . . . Slight dizziness while in the upright position, much increased by stooping . . . dizziness in

back part of head, as if the occiput were turning round. . . . Severe frontal headache, nausea, and loss of appetite.

Throat.—Dryness of fauces ; hawking up of viscid, stringy mucus . . . choking sensation in throat.

Respiration.—Respirations more frequent and labouring ; considerable dyspnoea, with stabbing pains through the heart.

Heart and Pulse.—A constant dull pain in the heart ; sharp pains through the cardiac region (compare symptoms 419 and 421 of *Spigelia*) A peculiar symptom was No. 94 (Sabin) : “*On turning on left side, a sharp sticking is felt, as if a needle were crosswise in the ventricles, and pricked at each contraction.*” Symptom 100 is significant. . . . Slight exertion, as rising from a chair, coughing, or laughing, causing distressing palpitation, with increase of the dull pain, which is constantly felt, at 10 a.m.; (102) heart’s action weak and fluttering at 11 a.m.

In all three provers there was a great increase of both heart and pulse-rate. In the woman, whose pulse was normally 56 to 70, it rose to 96, fifteen minutes after the first dose of the 1x tincture, subsiding to 60 in seven hours. In the same prover we have : pulse 98, regular and full, fifteen minutes after second dose ; great acceleration, irregular and jerking, with a peculiar thrill under the finger ; after ϕ tincture, pulse rose from 70 to 90, and shortly afterward rose to 100, and became irregular. Prover No. 2 records : pulse 90, undulating, tremulous, twenty-five minutes after the 1x tincture ; thirty minutes after the ϕ tincture, pulse 77, irregular, full ; intermits regularly, sometimes at every third, at other times every fourth, fifth, or sixth beat ; there is intermission of the heart-beats, which every slight exertion aggravates.

Prover No. 2, who started taking *iberis* with a touch of rheumatism in the left shoulder, experienced (symptom 110) “pain dull and heavy in left arm, commencing in tips of fingers, with tingling and numbness.” “Tingling and numbness, commencing in fingers of left hand, and gradually extending up the left arm.” In all three provers *iberis* increased the ventricular contractions of the heart for several hours, and this effect was confirmed by Dr. Gatchell’s experiment on frogs, in 1877.

A throat symptom was dryness of fauces ; hawking up of viscid, stringy mucus.

Stomach, Abdomen and Stool.—Loss of appetite, nausea, and headache ; sour eructations, fulness, oppression, tenderness over right hypochondrium ; several thin, whitish, or clay-coloured stools passed in quick succession. Here we have an important resemblance to *digitalis*.

On the urinary organs, this drug had no very marked effect ; the female prover had, on the first day, “frequent but scanty urination ; on the second day, urine excessive in quantity.”

These provings clearly establish the claim of *iberis* to be a cardiac remedy of value, but there is a need for their extension. I am not aware

of any later provings; but there is sufficient and increasing clinical evidence of its usefulness.

Case 1.—In the year 1890, our eminent colleague, Dr. Proctor, had suffered for two years from debility of the heart, with distressing attacks of palpitations, the sequelæ of influenza. All ordinary heart-remedies failed to relieve him. All stimulants (except port wine) and smoking aggravated this cardiac weakness so much that they had to be given up. He took iberis tincture (dose not stated) and in ten days it restored him to his normal state of health.

Case 2.—Dr. Chakravatti, of India, in 1905, reported a case cured by iberis 30. A railway clerk, aged 30, was visited March 13, 1901. He was suffering from fever and severe pain in the heart, shooting across into the right arm, and into the scapula; he had constant dyspnoea, and fits of suffocation and fainting. He was obliged to lie perfectly still on his left side. Auscultation disclosed the existence of endocarditis; a slight pericardial effusion; a loud pre-systolic bruit. The pulse was irregular; there was a tremulous sensation throughout the whole body, and great prostration. No improvement having been derived from either cactus or arsenicum, Iberis 30 was administered on March 15, with such immediate benefit that in two days the pericardial effusion had disappeared. On March 25, the report read, "No signs of endocarditis; patient is convalescent."

Case 3.—A lady patient of Dr. Proctor's, aged about 43, after a series of illnesses, began to suffer from angina pectoris. When she consulted Dr. Proctor she had endured this painful complaint for two years. Walking fast, or going upstairs brought on an attack. She found herself obliged to take chlorodyne as a palliative. Dr. Proctor gave her iberis ϕ tincture one drop three times a day, with the most brilliant results. She "felt better after the second dose."

Case 4.—Without citing any individual case, a writer in the *Hahnemannian Monthly*, December, 1905, from actual experience recommends iberis 1x in cases of cardiac dilatation where severe attacks of dyspnoea came on about 2 a.m., the patient being awakened by palpitation of the heart, without pain. A tickling in the larynx follows; then the throat and trachea are filled with mucus, which is expectorated as a white frothy sputum. The cough causes redness of the face. Dyspnoea lasts for an hour or two, with profuse sweating of the whole body, and coldness of hands and legs. The patient cannot lie down, but sits up, slightly bent forward. Besides dilatation there is some hypertrophy, because the heart's action seems strong and tumultuous, while the pulse is weak, thready, and irregular; the kidneys are active, as shown by free passage of urine, free from albumen. Thus iberis is distinctly suitable for attacks of nocturnal dyspnoea.

Case 5.—Kopp of Greenwich, New South Wales, asserts that he has found this drug beneficial in five varieties of vertigo, viz., those symptoms numbered 15, 16, 17, 18, 23, in Allen—they are too long to enumerate—

but as one form of this vertigo, a purely pathogenetic product, is likely to be a key-note for iberis, I will quote symptoms in full :—" *Dizziness in back part of the head, or feeling as if the occiput were turning round.*"

This being a cerebellar rather than a cerebral vertigo, I suggest that iberis would relieve the occipital headache which troubles some patients for a long time after the inhalation of chloroform ; and also that headache with giddiness accompanying sea-sickness, which persists after the victim to *Mal-de-mer* has emptied the stomach.

It may be taken as a fact that iberis, in pathogenetic doses, accelerates a normal pulse, but in homœopathic doses retards—slows down gradually—an abnormally quick pulse in disease.

Although I have no case of my own to quote as *treated throughout* by this medicine, yet I value it highly, and carry it in my pocket-case, because I have never yet failed to relieve *tachycardia* with it (usually in the 1x), whether this condition arose from valvular lesion, or from functional derangement.

As it slows down a too-rapid pulse without weakening the heart-muscle, I find it a useful substitute for digitalis or strophanthus.

Considering that we have had the provings of iberis on record for thirty-four years, we ought to have more clinical evidence of its usefulness.

Fresh provings will reveal more of its qualities as a heart remedy, and confirm, reverse, or modify those which I now have brought before you.

Iberis may be classed and compared with cactus, cratægus, digitalis, naja, and spigelia.

(B) CRATÆGUS OXYACANTHA.

is the well-known hawthorn, a characteristic English plant. Botanically, it belongs to the sub-order Pomeæ, of the nat. ord. Rosaceæ. A tincture is made from the fresh ripe berries, called "haws." One of the most ancient wild shrubs in Britain, and six times mentioned by Shakespeare, no medicinal qualities were ascribed to the hawthorn until a certain Irish doctor, Dr. Green of Ennis, took it up, we know not from what source, as a remedy for heart disease. His success was such as to spread his fame throughout Ireland. He kept the name of the drug secret, and after his demise, in 1893, his daughter revealed it as the berries of the hawthorn. Cratægus was adopted by the allopaths as a remedy in heart disease, chiefly as the result of a remarkable paper contributed to the *New York Medical Journal*, October 10, 1896, by Dr. M. C. Jennings, in which he described his uniform success in 43 cases of serious, often nearly moribund cardiac disease.

Soon the homœopaths took it up, clinically, and I am able to adduce much more evidence of its power in this sphere than is possible in the case of iberis. The first volume of Clarke's *Materia Medica* gives a good summary of what was then known of cratægus ; but there was no pathogenesy, except the following observations of Dr. T. C. Duncan :—" In my proving of this drug it produced a flurried feeling, due, I thought, to the rapid action of the stimulated heart. One prover, a nervous lady medical

student, gives to-day in her report "*a feeling of quiet and calmness mentally.*" This is a secondary effect, for it was preceded by "*an unusual rush of blood to the head, with a confused feeling.*"

Clarke quotes three illustrative cases, and constructs his "symptoms" upon these, incorporating the above observations of Duncan. But Dr. Claud A. Burrett, in 1908, organized a test-proving at the University of Michigan, which has so enlarged our knowledge of *cratægus*, as to make our employment of it more definite—though still there is much to be discovered. Two healthy and robust young men, aged 21 and 23 respectively, proved *cratægus* by taking the 3x dilution for four days, the 2x for two days, and during the remaining eight days of the experiment, from 5 to 40 drops of the mother tincture. While taking the 3x and 2x dilutions no symptoms appeared. But on the evening of the administration of 5-drop doses of the ϕ tincture, prover No. 2 noticed attacks of dizziness, lasting a few minutes, while the pulse-rate became lower, without change in its character, as shown by the sphygmograph.

Prover No. 1 felt no dizziness, but the pulse became slower and firmer. The normal pulse-rate in No. 1 prover was 84, and in No. 2, 88. Under the larger doses of the ϕ tincture the pulse declined to 56, and became much weaker. At this point both provers suffered from air-hunger, and had the windows opened, though it was winter (December). "

Dr. Burrett's commentary on the entire experiment is as follows: The action of *cratægus* is exerted almost entirely upon the heart-muscle, and may be compared with *digitalis*, *strophanthus*, and *adonis vernalis*. . . . The action of *cratægus* is less powerful than that of *digitalis* or *strophanthus* and much more prolonged than that of *adonis*, which exerts its action through the heart-nerves. It would seem to be best indicated in subacute or chronic heart cases where the effect upon the heart muscle is desired.

The following cases, carefully selected from our journals, show how valuable this remedy is in cardiac and arterial disease, even while we do not possess a complete pathogenesis.

CASES ILLUSTRATIVE OF THE ACTION OF CRATÆGUS OXYACANTHA.

Dr. Richard Hughes in his latest work, speaks well of *cratægus* as having "great power in restoring failing compensation," and as "able to do, in five-drop doses, all that *digitalis* in much larger quantities can accomplish."

Case 1 is cited apparently from practice of Dr. Hughes. "On December 3, 1899, I was called to visit Mr. H., aged 38, who had been afflicted with heart disease for many years. I found patient cyanotic, his limbs enormously swollen; almost complete suppression of urine; a very rapid intermittent, irregular, and at times almost imperceptible pulse. He was unable to raise himself in bed without symptoms of collapse; he spoke with difficulty; and in fact presented a perfect picture of approaching dissolution from heart failure. An examination showed an enormously enlarged and dilated heart with leakage regurgitation of aortic and mitral

valves. I gave 5-drop doses of the ϕ tincture of crataegus every three hours, for four days. At the end of this time he was sitting up in bed, the dropsy, having entirely disappeared, urinary secretion restored, and pulse fairly good. No relapse had occurred up to April, 1900.

Case 2.—In the *Medical Era* of 1901, Dr. Halbert reported the case of a youth, aged 20, who suffered from congenital (?) valvular disease, aggravated by dilatation, brought on by cycling up-hill and from imperfect compensatory hypertrophy. In the summer of 1900, Dr. Halbert found him in a most critical condition. The præcordium was bulging; the apex beat appeared at the border of the sixth rib; the right heart was greatly enlarged; the dyspnoea was terrible; both aortic and mitral regurgitation existed; and cyanosis was evident. Strychnia, digitalis, and every remedy and adjuvant I could think of having been used with only temporary benefit, I gave crataegus, five drops, four times a day. At the end of a fortnight the improvement was quite pronounced. The cardiac muscle was steadily strengthening, and affording the needed compensation. An unfortunate attack of pneumonia supervened, whereby his life was nearly lost, but he survived, and again crataegus was given, and kept up for some weeks.

He recovered, went to the country for change of air and when Dr. Halbert met him in town he said that "he was all right, and attending to business.

In two other cases of organic valvular lesion, one mitral, and one aortic, Dr. Halbert records that crataegus, in material doses, restored the heart to a workable and even comfortable condition.

Case 3.—The same physician gave to the *Clinique*, vol. vii., p. 52, an instructive instance of restoration of cardiac power in typhoid fever by crataegus. During the third week of typhoid, a girl of 12 had a sudden collapse of the heart, along with great pallor, cold extremities, pulse 120, very weak and irregular, and a rhythmic respiration. Strychnine, digitalis, and cactus had failed to give more than temporary relief. Under crataegus, in 5-drop doses every two hours she rallied at once.

Case 4.—Dr. Schlegel reported in the *Allgemeine Homöopathische Zeitung*, 1906, a complicated case, in which crataegus, besides quickly tranquillizing the heart, relieved bronchial asthma, and removed secondary albuminuria,

Mrs. K., aged 72, had suffered for twenty years from severe asthma, which, after the breaking out of an eczema on head and body, had improved, so that her general health was comparatively good previous to my summons to visit her. . . Sometimes bronchial catarrh would develop, but without serious complication. In the left groin there was, now and then, a deep-seated pain, and the urine had been during ten years occasionally bloody, and always carrying a trace of albumin. On October 23, 1905, Dr. S. found her "very miserable, with cold sweat on forehead and body, breathing heavily; had to lie with head high, cyanotic appearance; bronchial rales, with slight expectoration; urine scanty, full of sediment;

no thirst, no appetite. The pulse was very irregular, and a loud blowing systolic murmur was heard all over the cardiac region. Cratægus ϕ tincture, 3 drops every half hour, was given with immediate benefit, loosening up of the bronchial mucus, producing more abundant urine, and some sleep. On the afternoon of October 26, the heart suddenly became regular; the murmur vanished, and the general condition much improved. Continued crat. thrice a day. The albumin had become a mere trace."

Case 5.—Dr. Duncan relieved a lady patient who suffered from angina pectoris by the first dose (2 discs) of cratægus. Mrs. A. was a printer; the attacks of angina came on at the end of the week, when she was tired out by holding her composing stick. The attack made her "very much flurried, so that she had to stop work because she was so confused." Dr. D. found the heart somewhat hypertrophied, the pulse strong and forcible, and there was spinal hyperæmia. When the patient returned, reporting the cessation of the angina, she had also lost that "flurried feeling," and that anxious look of the countenance is the invariable indication of many forms of heart ailments. This case is a verification of the symptom first described as produced in himself by Dr. Duncan.

Case 6.—The *Hahnemannian Monthly*, July, 1909, prints a case contributed by Dr. G. Harlam Wells, showing how cratægus comes in to replace cactus, under certain circumstances. A merchant, aged 50, had suffered from mitral regurgitation and myocardial degeneration. Up to March, 1909, all his symptoms had been relieved by cactus, so that he at this period suffered only from shortness of breath on exertion. In March, 1909, the patient was attacked by influenza, accompanied by a distressing cough. There was a good deal of general prostration, and the pulse became abnormally weak, quick, and irregular. The influenza subsided in ten days, but the weak state of the pulse continued. Dr. Wells, finding cactus (10 drops of ϕ) of no avail, prescribed cratægus. The patient at this time complained of palpitation, shortness of breath, and a painful sensation of pressure on left side of chest below clavicle worse when tired; slight cough, with expectoration of grey mucus. There was irregularity of pulse (100 per minute); moderate hypertrophy of heart, with a loud systolic murmur, heard best at the apex, and transmitted to the axillary region. After two days of cratægus, the dose being 5 drops four times a day, the pulse came down to 70 per minute, and regular, but the systolic bruit remained.

Case 7.—In the *Kansas City Medical Journal*, 1898, Dr. Joseph Clements vividly records his relief from true angina pectoris, to which he had been subject for twelve years, these attacks latterly increasing in severity. Nitroglycerine tablets and cactus having failed to mitigate the latest seizure, he took 6-drop doses of cratægus tincture, before meals and at bedtime, increasing the dose to 10 drops. Within twenty-four hours his weak and very quick pulse, irregular, and at times intermittent, improved; in three weeks it became regular and strong. "Palpitation and dyspnoea left me," he wrote, "I began to walk up and down hills without difficulty,

and felt a general sense of security and well-being. Yet I had several slight attacks of angina, and one rather severe which was promptly relieved by 10 drops of cratægus tincture. I consider it the most useful discovery of the nineteenth century."

Case 8 is that of Dr. Bernard Arnulphy, whom we are glad to welcome to the Congress looking so well. He recorded it in the *Revue Homœopathique Française*, December, 1900. He writes: "I had an opportunity, at Chicago, of watching the action of cratægus on my own person during an attack of influenza, which had affected the heart so much that my pulse was imperceptible, and I could not rise from a horizontal posture without being threatened by syncope. . . . I took cratægus for fifteen days, at the end of which time I could get up and attend to business. That the cure was thorough is proved by the fact that I have since been able to climb Alpine summits of 3,000 metres without trouble."

Case 9.—Discoursing upon "Minor Remedies" in the *Iowa Homœopathic Journal* for 1910, Dr. Alice I. Ross, of Whittier, Iowa, tells of an old man, aged 79, who had a mitral heart lesion. In the spring of 1907 alarming symptoms developed, œdema of the limbs, feeble irregular pulse, dyspnoea, and a peculiar headache. He had a sensation of a hat on his head, so that he would often put his hand to his head to remove his (imaginary) hat; and he insisted that the back of his head was swollen. His condition became so serious that we summoned his children to bid him farewell. Several remedies having been tried without effect, I prescribed cratægus 1x, 5-drop doses, four times a day. The dyspnoea was relieved, the œdema of the lower limbs disappeared, and he went about the house with comparative comfort for almost a year, when his heart trouble, along with the weakness consequent upon his advanced age, took him off.

Case 10.—The usefulness of cratægus, as an intercurrent remedy in a desperate condition of the heart, was never better displayed than in a very interesting contribution by Dr. E. Cronin-Lowe to the *British Homœopathic Review*, September, 1907, narrating a case of heart disease complicated by pregnancy. I will condense it as much as possible.

A young wife, aged 20, was admitted into the London Homœopathic Hospital, May 27, 1907, suffering from very severe mitral stenosis and its consequences, orthopnoea, cyanosis, pulmonary congestion, and œdema of arms, feet and legs. Also she was 5½ months pregnant, for the first time. Œdema of the labia was so extreme that it was decided, after the heart symptoms had mitigated, to induce labour, and relieve the intense internal pressure on the veins. The heart was found to be greatly enlarged, especially on the right side, the apex-beat two inches outside the nipple line. A presystolic thrill was noticed, accompanying the usual bruit of mitral regurgitation. In the lungs there were rales, and hypostatic consideration. Excretion of urine only 12 oz. daily. Cactus, hyoscyamus, and digitalis infusion were given as indicated, but the patient did not improve; indeed, on June 2, the end appeared imminent. Hypodermic injections of digitalin 100 gr. and strychnine 30 gr., and 10-drop

doses of tincture of digitalis every two hours (also coffee) were administered. This energetic treatment saved her life, *pro tempore*, and enabled labour to be brought on successfully. A six months' foetus came away, without bad symptoms as regards the mother, and the good effect of delivery upon the heart was immediate. The pulse fell from 100 to 80 per minute; the breathing quietened down, and she slept comfortably. The report continues: "The obstetrical convalescence was perfect and uneventful. . . . and with crataegus ϕ three times a day this happy state of affairs continued for a fortnight." After this, progress began to flag; the valvular lesion had too firmly established itself; the patient failed to react to any of the well-chosen remedies, and died of pulmonary œdema and suppression of urine.

Many other striking cases can be found in our journals.

This new remedy was first brought under the notice of our colleagues at the British Homœopathic Congress of 1901, which met at Liverpool.

During the discussion of Dr. H. Nankivell's paper on "Cardiac Debility," Drs. Dyce Brown and E. M. Madden spoke highly of crataegus, which they had used with constant success. Dr. Brown mentioned the case of a lady aged 70, who had a dilated heart, with both mitral and aortic bruits. Two weeks of crataegus improved all the morbid conditions; and a month more of the medicine completely removed all the symptoms. The heart regained its normal size and position.

It is evident that both allopath and homœopath have used crataegus for the same cardiac ailments, and with the same success. The typical dose seems to be 5 drops of the ϕ tincture. I, however, get equally good results from the first decimal. The therapeutics of crataegus from actual clinical experience, is as follows, derived from various competent observers:—

Jennings (allopath), after a study of forty-three cases, writes, "After a few days' use of crataegus the cardiac impulse is greatly strengthened, and yields that low soft tone so characteristic of the (normal) systole, as can be shown by the cardiograph. The entire central nervous system is favourably influenced; appetite increases; assimilation and nutrition improve; showing an influence over the solar plexus. . . . A sense of quietude and well-being rests upon the patient who, before its use, was cross, melancholic, and irritable." He adds limitation: "I doubt if it is indicated in fatty enlargement of the heart."

Reilly (allopath), in an article in the *American Medical Association Journal*, July, 1910, states that his most successful use of crataegus was in cardiac neuroses. He remarks that crataegus is better borne (given in the preparations of fluid extract or tincture) than digitalis, as it causes less disturbance of the digestion. "Crataegus is a mild cardiac tonic without any decided diuretic action, and one which does not raise blood-pressure. . . . Its chief value is where the heart is in a weak, irritable condition, following influenza, or in neurasthenia, with a marked arhythmia of the respiratory type."

Our colleague, Dr. Baltzer, of Stettin, Prussia, writes in the *Berliner Homœopathische Zeitschrift*, July, 1910, of this remedy thus: "With *cratægus*, when it is indicated, we generally have dilatation of the heart. I have given it in many cases with good results . . . and also in diabetes mellitus, where the dilatation of the heart gave the patient no special inconvenience. . . . It, is one of four best remedies in myocardiac processes, having their origin in influenza, typhus, and diphtheria. I have not been hitherto able to find any *Characteristic* symptoms for *cratægus*."

Our eminent colleague, Dr. Bernard Arnulphy's estimate of *cratægus*, agrees with Baltzer's, written ten years later. In his excellent article in the *French Homœopathic Review*, Arnulphy, comparing *cratægus* with *naja*, writes: "*Cratægus* does service in every form of myocarditis, and exhibits an undeniable tonic action, quite, moderate, non-cumulative, on the muscular fibres of the heart; equally suiting both aortic and mitral cases. The insomnia of aortic sufferers is generally helped by *cratægus*. . . . Whereas *naja tripudians* exhibits its powers in chronic endocarditis of the mitral type, keeping up the force of the cardiac muscle; prolonging compensation; and preventing visceral engorgement, *cratægus* has no influence over the endocardium."

Dr. Jos. Clements, in 1906, made a striking suggestion about the use of *cratægus* in arterial degeneration, based upon his experiments. He writes: "*Cratægus* has a *solvent power upon crustaceous and calcareous deposits* in the lumen of the arteries resembling the effect of iodide of potassium on the nodes of syphilis; therefore it might prevent the progress of arterio-sclerosis, in old people."

In my own practice I employ *cratægus* *both* to strengthen a feebly acting heart, *and* to quieten an irritable heart, in persons whose sensitiveness to drugs render it inadvisable to use *digitalis* or *strophanthus*.

I often give *cratægus* as a change from *cactus* or *naja*, when the action of either has seemed to have exhausted itself. *Iberis* and *cratægus* are now in my pocket-case,*and I use them with increasing frequency.

There is a resemblance between the medicinal powers of these two remedies. But their therapeutic areas are not co-terminous. It remains for further provings and more clinical records to precisely define them.

The cases (tabulated below) brought forward in this paper which, I believe, summarizes our present knowledge of *cratægus*, show that this new remedy should be classed with *convallaria*, *iberis*, *naja*, *strophanthus* and *adonis vernalis*. To these must be added *amygdala amara*, *laurocerasus*, *prunus virginiana*, and hydrocyanic acid, if, as some think this plant owes its medicinal properties to the prussic acid contained in it.

I am afraid that this paper exceeds the time-limit fixed by the Committee, but the subject grew in interest as I investigated it, and I hope that it will stimulate my colleagues in all countries to use freely in their practices both these heart remedies.

SUMMARY OF CASES TREATED BY *IBERIS AMARA.*

Sex	Age	Nature of disease.	Result.
Male ...	60	Cardiac debility after influenza. ...	Cure.
" ...	30	Angina, endocarditis, pericardial effusion ...	"
Female ...	43	Angina pectoris ...	"
Both sexes	...	Cardiac dilatation with nocturnal attacks of dyspnoea ...	—
" "	...	Vertigo of five different kinds (see Allen's Encyclopædia, vol. v., p. 62). Recommended in tachycardia, &c. ...	—

SUMMARY OF RECORDED CASES TREATED BY *CRATÆGUS OXYACANTHA.*

Sex	Age	Nature of disease.	Result
Male ...	38	Dilatation, hypertrophy of heart, aortic and mitral regurgitation (ϕ tincture) ...	Cure.
" ...	20	Dilatation, aortic and mitral regurgitation ...	"
Female ...	12	Collapse of heart in third week of typhoid ...	"
" ...	72	Mitral stenosis, bronchial asthma, chronic nephritis ...	Recovery.
Male ...	50	Mitral regurgitation, myocardiac degeneration, prostration ...	Relief. Permanent
" ...	60	True angina pectoris ...	relief.
" ...	52	Cardiac debility after influenza ...	Cure.
" ...	79	Mitral valvular lesion, œdema, threatened collapse ...	Recovery.
Female ...	20	Mitral stenosis, anasarca, delivery of six months' foetus ...	Relief.
" ...	70	Dilated heart with mitral and aortic bruits ...	Cure.
" ...	45(?)	Cardiac hypertrophy, spinal hyperæmia, pseudo-angina ...	Relief.

A c k n o w l e d g m e n t s .

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